Sunday, December 15, 2013

8:00 AM - 9:00 AM  Registration and Breakfast

9:00 AM - 9:25 AM  Pavel Bleher — Indiana University - Purdue
Calculation of the Constant Factor in the Six-Vertex Model

9:25 AM - 9:50 AM  Avi Wigderson — Institute for Advanced Study
Randomness Extractors: a Survey

9:50 AM - 10:15 AM  Jean-Philippe Bouchaud — Ecole Polytechnique
Anomalous Price Impact and the Critical Nature of Liquidity in Financial Markets

10:15 AM - 10:45 AM  Coffee

10:45 AM - 11:0 AM  H. Eugene Stanley — Boston University
New Insights From Statistical Physics Into Economics & Finance

11:0 AM - 11:35 AM  Luciano Pietronero — ISC CNR, Università di Roma Sapienza
New Metrics for Economic Complexity: Measuring the Intangible Growth Potential of Countries

11:35 AM - 12:00 PM  Paul Falkowski — Rutgers University
Photons as Measure of Life on Earth

12:00 PM - 1:30 PM  Lunch

1:30 PM - 1:55 PM  Joshua Plotkin — University of Pennsylvania
Evolution of Generosity in the Prisoner’s Dilemma

1:55 PM - 2:20 PM  Ethan Akin — City College of New York
Solving the Iterated Prisoner’s Dilemma

2:20 PM - 2:45 PM  Charles Epstein — University of Pennsylvania
The Life History of PDEs and Computational Electromagnetics
2:45 PM - 3:15 PM  Coffee

3:15 PM - 3:40 PM  Michael Fisher — University of Maryland
Effects of Proximity and Connectivity: Superfluid Helium Boxes and Layered Ising Models

3:40 PM - 4:05 PM  Michael Shelley — Courant Institute
Models of Activity-Driven Surface Flows.

4:05 PM - 4:30 PM  Dave Thirumalai — University of Maryland
Filtering Noise in a Biological Signaling Network

4:30 PM - 4:55 PM  Arnie Levine — Institute for Advanced Study
Measuring the Clinal Evolution of Cancers and the Mutation Rates of Cancer Cells

4:55 PM - 5:20 PM  Elliott Lieb — Princeton University
Freeman Dyson

5:30 PM - 7:30 PM  Cocktails & Concert
sponsored by Springer
Fiber Optics Auditorium - Everyone is invited

7:30 PM -  Banquet
Busch Dining Hall - Reservation required

Monday, December 16, 2013

8:00 AM - 8:40 AM  Registration and Breakfast

8:40 AM - 10:10 AM  Short Talks - Session A

10:10 AM - 10:40 AM  Coffee

10:40 AM - 11:05 AM  Karin Rabe — Rutgers University
New Ferroelectrics and Antiferroelectrics by Design

11:05 AM - 11:30 AM  Eric Akkermann — Technion
Universal Current Fluctuations and Large Deviations in the Symmetric Simple Exclusion Process on An Arbitrary Graph

11:30 AM - 11:55 AM  Paul Steinhart — Princeton University
Natural Quasicrystals
Human Rights and Medical Work in Iran: A Personal History

Lunch

The TTLS Model of the Low-Temperature Properties of Glasses: Successes, Problems and Prospects

Many-Body Anderson Localization

Fractional Quantized Hall Effect and Phase Transitions in the Lowest Landau Level of Single-Layer Graphene

Microscopic and Macroscopic Formulations of Quantum Mechanics

Coffee


An Experimental Evidence-Based Computational Paradigm for New Logic-Gates in Nervous Activity

Free Energy Fluctuations in Systems With Quenched Disorder

Rapid Spatial Spread of Biology

P. W. Anderson: His Influential Works

Cocktails and Dinner

Registration and Breakfast
8:15 AM - 9:30 AM  Short Talks - Session B

9:30 AM - 10:00 AM  Coffee

10:00 AM - 10:25 AM  Cristopher Moore — University of New Mexico
Analyzing Networks With the Cavity Method

10:25 AM - 10:50 AM  Luca Peliti — Università di Napoli
Thermodynamics of Information Handling in Some Cellular Processes

10:50 AM - 11:15 AM  Lai-Sang Young — Courant Institute
Nonequilibrium Steady States for Some Particle Systems

11:15 AM - 11:40 AM  Vered Rom-Kedar — Weizmann Institute
Mechanisms for Robust Exponential in Time Acceleration

11:40 AM - 12:05 PM  Herbert Spohn — Technische Universität München
Nonlinear Fluctuating Hydrodynamics and Anharmonic Chains

12:05 PM - 12:30 PM  Dov Levine — Technion
Exotic Ordered States

12:30 PM - 1:40 PM  Lunch

1:40 PM - 2:05 PM  Wojciech De Roeck — Universität Heidelberg
Rigorous Theory of Open Quantum Systems: Thermalization and Diffusion.

2:05 PM - 2:30 PM  Thomas Spencer — Institute for Advanced Study
Anderson Like Transition For a Susy Model in 3d.

2:30 PM - 2:55 PM  Alice Guionnet — Massachusetts Institute of Technology
About Topological Expansions

2:55 PM - 3:20 PM  Horng-Tzer Yau — Harvard University
Eigenvector Statistics of Random Matrix Models

3:20 PM - 3:45 PM  Edward Witten — Institute for Advanced Study
A New Look at the Jones Polynomial of a Knot

3:45 PM - 4:10 PM  Short Talks - Session C