

111 th Statistical Mechanics Conference
Rutgers University, Busch Campus, Hill Center, Room 114
Sunday, May 11, 2014 - Tuesday, May 13, 2014

Honorees

JOHN HOPFIELD

LEONID PASTUR

RAGHU VARADHAN

Sunday, May 11, 2014

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

9:00 AM 9:25 AM Erik Winfree — Caltech
Neural Network Behaviors in Synthetic Biochemical Systems

9:25 AM 9:50 AM Lai-Sang Young — Courant Institute
Emergent Dynamics in a Model of Visual Cortex

9:50 AM 10:15 AM Frédéric Klopp — Université Pierre et Marie Curie
Interacting Electrons in a Random Medium

10:15 AM 10:40 AM John Imbrie — University of Virginia
A Rigorous Result on Many-Body Localization

10:40 AM 11:10 AM *Coffee*

11:10 AM 11:35 AM Abel Klein — University of California - Irvine
Ac-Conductivity and Electromagnetic Energy Absorption for the Anderson Model in Linear Response Theory

11:35 AM 12:00 PM Gianni Jona-Lasinio — University of Rome - La Sapienza
Finite Time Thermodynamics

12:00 PM 12:25 PM Christian Maes — KU Leuven
H-Theorems and Forces Out of Equilibrium.

12:25 PM 1:50 PM *Lunch*

1:50 PM 2:15 PM Bertrand Halperin — Harvard University
Bose-Einstein Condensation of Excitons and Polaritons.

2:15 PM 2:40 PM Yannis Kevrekidis — Princeton University
Coarse-Graining the Dynamics of (and on) Complex Network

2:40 PM 3:05 PM Bernard Chazelle — Princeton University
Dynamic Networks, Influence Systems, and Renormalization

3:05 PM 3:30 PM Partha Mitra — Cold Spring Harbor Laboratory
Statistical Physics and Distributed Control Theory

3:30 PM	4:00 PM	Coffee
4:00 PM	4:25 PM	Andrea Liu — University of Pennsylvania Mechanical Reaction-Diffusion Equations in Biological Systems
4:25 PM	4:50 PM	Alexander Grosberg — New York University Scaling in Topologically Constrained Polymers
4:50 PM	5:15 PM	Larry Abbott — Columbia University Harnessing the Dynamics of Random Networks
5:15 PM	5:40 PM	Stanislas Leibler — Rockefeller University Kinetic Proofreading: 40 Years Later
5:45 PM	7:45 PM	Cocktails & Concert sponsored by Springer Fiber Optics Auditorium - Everyone is invited
7:50 PM		Banquet Busch Dining Hall - Reservation required

Monday, May 12, 2014

7:50 AM	8:30 AM	Registration and Breakfast
8:30 AM	9:40 AM	Short Talks - Session A
9:40 AM	10:10 AM	Coffee
10:10 AM	10:35 AM	Mark Alber — University of Notre Dame Cell Clustering and Cell Division During Bacterial Swarming
10:35 AM	11:00 AM	Mark Newman — University of Michigan Graph Spectra and Phase Transitions in Complex Networks
11:00 AM	11:25 AM	Sharon Glotzer — University of Michigan Crowding & Transitions in Shape Space
11:25 AM	11:50 AM	William Bialek — Princeton University Thermodynamics for Networks of Real Neurons
11:50 AM	12:15 PM	Eugene Chudnovsky — CUNY Lehman College and Graduate School Human Rights and Social Responsibilities of Scientists
12:15 PM	1:20 PM	Lunch
1:20 PM	1:45 PM	Timothy Halpin-Healy — Columbia University 2+1 KPZ: Universal Correlators & Distributions
1:45 PM	2:10 PM	Eugene Chudnovsky — CUNY Lehman College and Graduate School Random Fields and Topology

2:10 PM	2:35 PM	Peter Mueller — Ludwig-Maximilians-Universität Anderson's Orthogonality Catastrophe
2:35 PM	3:00 PM	Alexander Soshnikov — University of California - Davis CLT Type Results for Eigenvalue Statistics in Large Random Matrices
3:00 PM	3:30 PM	Coffee
3:30 PM	3:55 PM	Boris Khoruzhenko — Queen Mary University of London How Many Eigenvalues of a Truncated Orthogonal Matrix Are Real?
3:55 PM	4:20 PM	Yan Fyodorov — Queen Mary University of London High-Dimensional Random Landscapes and Random Matrices
4:20 PM	4:45 PM	Werner Kirsch — University of Hagen On the Semicircle Law for Curie-Weiss Matrix Ensembles
4:45 PM	5:10 PM	Paul Chaikin — New York University Self-Replication, Exponential Growth and Environmental Selection in an Artificial System
5:10 PM	6:10 PM	Laudatios John Hopfield by W. Bialek Leonid Pastur by W. Kirsch Raghu Varadhan by H.T. Yau
6:10 PM		Cocktails and Dinner Hill Center - 7th Floor

Tuesday, May 13, 2014

7:50 AM	8:30 AM	<i>Registration and Breakfast</i>
8:30 AM	9:30 AM	Short Talks - Session B
9:30 AM	10:00 AM	Coffee
10:00 AM	10:25 AM	Gregory Falkovich — Weizmann Institute New Type of Anomaly in Turbulence
10:25 AM	10:50 AM	Francesco Zamponi — Ecole Normale Supérieure Exact Computation of the Critical Exponents of the Jamming Transition
10:50 AM	11:15 AM	Anna De Masi — Università di L'Aquila Global Solution for a Free Boundary Problem Via Hydrodynamic Limit and Mass Transport Inequalities
11:15 AM	11:40 AM	Krishnamurthi Ravishankar — State University of New York - New Paltz Voter Model Perturbations and One Dimensional Stochastic Potts Models
11:40 AM	12:05 PM	Michael Aizenman — Princeton University Resonant Delocalization on the Complete Graph

12:05 PM	12:30 PM	Stefano Olla — Université Paris Dauphine Fractional Superdiffusion of Energy in a Chain of Oscillators
12:30 PM	1:40 PM	<i>Lunch</i>
1:40 PM	2:05 PM	Jeremy Quastel — University of Toronto The Kardar-Parisi-Zhang Equation and Universality Class
2:05 PM	2:30 PM	Horng-Tzer Yau — Harvard University Recent Advances for the Spectral Statistics of Random Matrix
2:30 PM	2:55 PM	Percy Deift — Courant Institute On the Asymptotic Behavior of a Log Gas in the Bulk Scaling Limit in the Presence of a External Field
2:55 PM	3:20 PM	Peter Sarnak — Princeton University Topologies of the Zero Sets of Random Band Limited Functions
3:20 PM	3:45 PM	Yakov Sinai — Princeton University Stochastic Calculus and the Ising Model