J Stat Phys (2007) 129: 411–415
DOI 10.1007/s10955-007-9395-9

Program of the 97th Statistical Mechanics Conference Rutgers University, Hill Center, Room 114 Sunday, Monday and Tuesday, May 6–8, 2007

Joel L. Lebowitz

Received: 6 July 2007 / Accepted: 24 July 2007 / Published online: 5 September 2007

M. Disertori, Universite de Rouen, Margherita.Disertori@univ-rouen.fr
Rigorous Supersymmetric Approach to Random Matrix Problems

B. Schlein, University of California, schlein@math.ucdavis.edu
Derivation of the Time-Dependent Gross–Pitaevskii Equation

P. Fendley, University of Virginia, fendley@rockpile.phys.virginia.edu
Ground States of Strongly Correlated Fermions From Rhombus Tilings

R. Fernandez, Universite de Rouen, Roberto.Fernandez@univ-rouen.fr
New Criterion for the Convergence of the Cluster Expansion

L. Bunimovich, Georgia Institute of Technology, bunimovh@math.gatech.edu
Dynamical Networks

H. Koch, University of Texas at Austin, koch@math.utexas.edu
Renormalization of Flows, and Quasiperiodic Orbits

G. Mussardo, International School for Advanced Studies, mussardo@sissa.it
Breaking Integrability

Please note that in many cases there is only one speaker listed, although the work may have been done with collaborators. Also, the addresses may be incomplete. Information about past and future meetings, as well as positions wanted and available can be obtained at:
http://www.math.rutgers.edu/events/smm/index.html.
The next Statistical Mechanics Conference will take place December 16–18, 2007.

J.L. Lebowitz (✉)
Center for Mathematical Sciences Research, Rutgers University, 110 Frelinghuysen Road, Piscataway, NJ 08854-8019, USA
e-mail: lebowitz@sakharov.rutgers.edu

P. Wiegmann, University of Chicago, wiegmann@uchicago.edu
Hele-Shaw/DLA Problem

Y. Sinai, University of Princeton, sinai@Math.Princeton.EDU
Blow Ups in Navier–Stokes System and Renormalization Group Method

G. Lawler, University of Chicago, lawler@math.uchicago.edu
The Natural Parametrization for the Schramm–Loewner Evolution

S. Smirnov, University of Geneva, smirnov@math.unige.ch
Conformal Invariance in the Ising Model

H.T. Yau, Harvard University, htyau@math.harvard.edu
Lower Bound on the Blow-Up Rate of the Axisymmetric Navier–Stokes Equations

E. Lieb, Princeton University, lieb@math.princeton.edu
Some Thoughts About Density-Matrix-Functional Theory

U. Landman, Georgia Institute of Technology, uzi.landman@physics.gatech.edu
Small is Different: Formation, Stability and Breakup of Nanojets—Molecular Dynamics Simulation Experiments and Stochastic Hydrodynamics

E. Heller, Harvard University, e.j.heller@mac.com
From Random Waves to Statistical Mechanics: Quantum Chaos for N Particles

W. Bialek, Princeton University, wbialek@princeton.edu
Ising Models for Networks of Real Neurons

K. Hepp, Institute for Theoretical Physics, khepp@itp.phys.ethz.ch
Quantum Mechanics and Higher Brain Functions: Lessons from Quantum Computation and Neurobiology

B. Simon, California Institute of Technology, bsimon@caltech.edu
Extensions of Szego's Theorem

A. Chakraborty, MIT, arupc@mit.edu
Fluctuation Effects in T Cell Signaling

A. Libchaber, Rockefeller University, asveste@rockefeller.edu
Physical Aspects of the Origin of Life Problem

Human Rights Session, Gabor Rona, Human Rights First
A Bull in the China Shop: the 'War on Terror' and International Law in the United States

I.M. Sigal, University of Toronto, im.sigal@utoronto.ca
Renormalization Group and Scattering Theory of Electrons and Photons

N. Andrei, Rutgers University, natan@physics.rutgers.edu
Quantum Impurities Out-of-Equilibrium: Currents and Entropy Production

A. Ludwig, University of California, Santa Barbara, ludwig@physics.ucsb.edu
Boundary Critical Behavior and Multifractality at Anderson (De-)Localization Transitions

A. Zamolodchikov, Rutgers University, sashaz@physics.rutgers.edu
Fluctuating Geometry and Nucleation in 2D

M. Douglas, Rutgers University, mrd@physics.rutgers.edu
Statistics of String Vacua

S. Goldstein, Rutgers University, oldstein@math.rutgers.edu
Canonical Typicality and GAP Measures for Quantum States

H. Pinson, University of Arizona, htp@math.arizona.edu
Towards a Nonperturbative Renormalization Group Analysis

M. Zirnbauer, Cologne University, zirn@thp.uni-koeln.de
Energy Correlations for a Random Matrix Model of Disordered Bosons

L. Pastur, University of Kharkov, lpastur@flint.ilt.kharkov.ua
On the Law of Addition of Random Matrices: Covariance and the Central Limit Theorem for Traces of Resolvent

A. Klein, University of California, Irvine, aklein@math.uci.edu
The Universal Occurrence of Localization in the Continuum Anderson Model

Round Table: Statistical Mechanical Aspects of Localization and Entanglement
Participants include: M. Aizenman, J. Cardy, J. Frohlich and T. Spencer

G.B. Giacomin, Universite Paris 7, giacomin@math.jussieu.fr
The Localization Transition of Copolymers Near Selective Interfaces

G. Ben Arous, NYU, gba1@nyu.edu
Equilibrium and Dynamic Universality Results for Mean-Field Spin Glasses

A. Bovier, Weierstrass Institute, bovier@wias-berlin.de
Aging in Spin Glass Models on Intermediate Time Scale: Universality of the Trap Model

T. Seppalainen, University of Wisconsin, seppalai@math.wisc.edu
Fluctuations in the Asymmetric Simple Exclusion Process

U. Tauber, Virginia Tech, tauber@vt.edu
Current Distribution in Driven Diffusive Systems: Field Theory Approach

B. Vollmayr-Lee, Bucknell University, bvollmay@bucknell.edu
Anomalous Dimension in the Trapping Reaction

J. Harnad, University of Montreal, harnad@crm.umontreal.ca
Tau Functions, Integrable Systems and Random Processes

P. Kleban, University of Maine, kleban@maine.edu
On Cardy's Crossing Formula and Related Formulas in Percolation

F. Hansen, University of Copenhagen, Frank.Hansen@econ.ku.dk
Metric Adjusted Skew Information

Short Talks

**For author presenting talk*

M. Pinsky, University of Nevada, Reno
Averaging Reduction for Nonlinear Systems with Dense and Multiple Resonances

*A. Ayyer, M. Stenlund, Rutgers University
Exponential Decay of Correlations for Randomly Chosen Hyperbolic Toral Automorphisms

L. Andrey, Academy of Sciences
No Quantum Limits to the Second Law of Thermodynamics

S. Adams, Max Planck Institute for Math. and Sciences
Large Deviations for Empirical Path Measures in Cycles of Integer Partitions

*A. Giuliani, J.L. Lebowitz and E. Lieb, Princeton University
Spin Models with Long Range Competing Interactions: Striped Nature of the Ground States

*P.K. Mohanty, B.D Todd and D.J. Saeles, SINP
Generic Features of the Wealth Distribution in Ideal-Gas-Like Markets

S. Das, University of Maryland
Is the Stillinger-Lovett Sum Rule for an Electrolyte Correct at Criticality?

*L. Blum, and M. Arias
A New Theory for Colloids and Electrolytes

*S. Mashkevich, S. Matveenko, and S. Ouvry, Schrodinger, Inc
Exact Results for the Spectra of Bosons and Fermions with Contact Interaction

*S.J. Rahi, P. Virnau, L. Mirny, and M. Kardar, MIT
Prediction of Transcription Factor Specificity Using All-Atom Models

*A. Rosso, A. Zoia, and M. Kardar, MIT
Fractional Laplacian in Bounded Domains

*A. Zoia, Y. Kantor, and M. Kardar, MIT
Distributions of Passage Times and Distances Along Critical Curves

*M. Kardar and Y. Kantor
First Passage Time Distribution for a Tagged Monomer

S. Ji, Rutgers University
Is Life an 'Informed' Critical Phenomenon?

R. Fisch, Princeton University
Aspect-ratio scaling of domain wall entropy for the 2-dimensional +- J Ising spin glass

*T. Klongcheongsan & U. Tauber, Virginia Tech
Monte Carlo Simulation of Half-Loop and Double-Kink Excitations in the Strongly Pinned Bose Glass Phase

*A. Toom & A. V. Rocha, UFPE
Substitution Operators

J. Jalkanen, Helsinki University of Technology
Numerical Study on Heteroepitaxial Naniislands in Two Dimensions

Y. Nagahata, Osaka University
Regularity of the Diffusion Coefficient Matrix for Lattice Gas Reversible Under Gibbs Measures with Mixing Condition

*C. Scullard and R. Ziff, University of Chicago
General Method for Predicting Approximate Bond Percolation Thresholds

*J.J.H. Simmons and P. Kleban, University of Maine
Exact Factorization of Correlation Functions in 2D Critical Percolation

*Y. Shokef, G. Shulkind and D. Levine, University of Pennsylvania
Isolated Non-Equilibrium Systems in Contact

*D. Gioev, P. Deift, T. Kriecherbauer & M. Vanlessen, University of Rochester
Universality for Orthogonal and Symplectic Hermite-Type and Laguerre-Type Random Matrix Ensembles