Program of the 87th Statistical Mechanics Meeting Celebrating the 85th Birthday of Howard Reiss

Rutgers University, May 19–21, 2002

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/statmech.html.

The next Statistical Mechanics Meeting will take place December 15–17, 2002, at Rutgers University.

Joel L. Lebowitz

REVIEW TALKS

The Computational Statistical Mechanics of Simple Models of Liquid Water
M. W. Mahoney, Yale University, michael.mahoney@yale.edu
Surface Crystallization of Cloud Droplets: Implications for Climate Change and Ozone Depletion
A. Tabazadeh, NASA, atabazadeh@mail.arc.nasa.gov
Adiabatic Nucleation, an Alternative Nucleation Model
E. Meyer, Universidade Federal do Rio de Janeiro, Brazil, erich@if.ufrj.br
The Uphill Turtle Race; Short Time Behavior of Nucleation Probabilities
H. van Beijeren, Utrecht University, The Netherlands, H.vanBeijeren@phys.uu.nl
Toward the Maximally Random Jammed State of Sphere Packings
S. Torquato, Princeton University, torquato@electron.princeton.edu

Unusual Properties of the Classical Gaussian Core Model
    F. H. Stillinger, Princeton University, fhs@princeton.edu
Progress in Electronic Density Functional Theory toward the Treatment of
Large Systems
    E. Carter, UCLA, eac@chem.ucla.edu
Self-Assembly of Viral Capsids
    W. Gelbart, UCLA, gelbart@chem.ucla.edu
Stiff Polymers
    H. Frisch, SUNY at Albany, frisch@physics.sun.ac.za
The Inelastic Hard Sphere Model for Vibrated Granular Media
    J. Talbot, Duquesne University, talbot@duq.edu
New Results in the Theory of One-Dimensional Conservative Liquids
    *P. Choquard and J. Wagner, EPFL, Switzerland, philippe.choquard
    @epfl.ch
Model Classical Fluids under Nanoscale Confinement
    J. K. Percus, Courant Institute, jkp1@scires.acf.nyu.edu
Phase Transitions in Nanoconfined Fluids
    A. V. Neimark, TRI/Princeton, aneimark@triprinceton.org
Mesoscopic Nonequilibrium Thermodynamics
    M. Rubi, University of Barcelona, miguel@ffn.ub.es
Monte Carlo Simulations in the Isothermal-Isobaric Ensemble: The
Requirement of a ''Shell'' Molecule and Simulations of Small Systems
    D. S. Corti, Purdue University, dscorti@ecn.purdue.edu
Ground State Properties of Dilute Interacting Bose Gases
    E. Lieb, Princeton University, lieb@math.princeton.edu
Proof of Bose–Einstein Condensation for Dilute Trapped Gases
    R. Seiringer, Princeton University, rseiring@math.princeton.edu
Kinetics of Monolayer Phase Transitions
    C. Knobler, UCLA, knobler@chem.ucla.edu
Geometry and Physics of Proteins
    J. Banavar, Penn State University, jayanth@phys.psu.edu
Zero-dimensional Fermi-liquid
    B. Altshuler, Princeton University, bla@feynman.princeton.edu
Motor Proteins: Appropriate Statistical Mechanics
    M. E. Fisher, University of Maryland
Structure in the Liquid-Vapor Interfaces of Metals and Alloys
    S. Rice, University of Chicago, sarice@uchicago.edu
Minimalistic Analysis of the Heat Capacity of Supercooled Liquids and
Glasses near Tg
    *D. Kivelson and G. Tarjus, UCLA, kivelson@chem.ucla.edu
Bubbles in Trajectory Space and the Dynamical Arrest of Glass Formers

D. Chandler, University of California, Berkeley, chandler@gold. cchem.berkeley.edu

Upper Bounds on Coarsening Rates

R. V. Kohn, Courant Institute, kohn@cims.nyu.edu

Rotating Crystals in Grain Growth

J. E. Taylor, Rutgers University, taylor@math.rutgers.edu

The Baffling Role of Ionic Strength in Chiral Colloidal Liquid Crystals

S. Fraden, Brandeis University, fraden@binah.cc.brandeis.edu

Freezing of Hard Spheres in Confinement

W. Kegel, Utrecht University, The Netherlands, w.k.kegel@chem. uu.nl

Jamming

A. Liu, UCLA, Los Angeles, liu@chem.ucla.edu

Round Table on Statistical Mechanics of Hard Objects

Participants will include: H. Reiss, G. Stell, F. H. Stillinger, S. Torquato. J. L. Lebowitz, chair

Dynamics of a Massive Piston in an Ideal Gas: Oscillatory Motion, Approach to Equilibrium and Scaling Limit

*N. Chernov, University of Alabama at Birmingham, chernov@ math.uab.edu, J. L. Lebowitz, Rutgers University and Ya. Sinai, Princeton University

Statistical Physics for Cosmic Structures

L. Pietronero, University of Rome, luciano@pil.phys.uniroma1.it

Hysteresis and Dynamic Phase Transition in Kinetic Ising Models

P. A. Rikvold, Florida State University, rikvold@csit.fsu.edu

Biased Migration: A Model for the Distribution of City Sizes

*F. Leyvraz, UNAM, Mexico, f_leyvraz2001@yahoo.com, and S. Redner, Boston University

Simulations and Density Functional Theory for the Selectivity of Ion Channels

D. Henderson, Brigham Young University, doug@huey.byu.edu

Discovering and Decoding Genomic Modules for Body Patterning in Drosophila

N. Rajewsky, Rockefeller University, nr@edsb.rockefeller.edu

DNA Mechanics and Gene Regulation

W. Olson, Rutgers University, olson@rutchem.rutgers.edu

Some Problems in Structural Genomics Which Bridge Chemistry, Physics, and Bioinformatics

R. M. Levy, Rutgers University, ronlevy@lutece.rutgers.edu

Characterization of the Visited Volume in Optical Imaging

G. Weiss, NIH, ghw@helix.nih.gov

SHORT COMMMUNICATIONS

Random Field Models for Relaxor Ferroelectric Behavior
    R. Fisch, University of Pennsylvania, rfisch@seas.upenn.edu

The Application of Scaled Particle Theory to the Translocation of a Rod through a Pore
    *R. K. Bowles, M. Castelnovo, H. Reiss and W. Gelbart, UCLA, bowles@chem.ucla.edu

Tension Percolation and Sphere Packings
    K. Rybnikov, Cornell University, kr57@cornell.edu

Nucleation in Small Systems
    *D. Reguera, R.K. Bowles, Y. Djikaev, and H. Reiss, UCLA, davidr@chem.ucla.edu

On Nucleation in the Ising Model
    V. A. Shneidman, New Jersey Institute of Techology, vitaly@oak.njit.edu

Entropy and Time-Scales of Thermalization in Simple Liquids
    D. Osorio, *M. Mayorga, J. Orozco and L. Romero-Salazar, Universidad Autonoma del Estado de Mexico, Mexico, mmr@uaemex.mx

Irreversible Thermodynamics of Thermo and Electrophoretic Phenomena in Colloids
    *L. Romero-Salazar, M. Mayorga, Universidad Autonoma del Estado de Mexico, lors@uaemex.mx

Activated Dynamics at a Non-Disordered Critical Point
    *D. Das, B. Chakraborty, J. Kondev, Brandeis University, dibyendu @brandeis.edu

One-Component Numerical Glass Formers: A First Insight
    *C. Laforge, University of Amsterdam, the Netherlands, laforge@science.uva.nl

Lower Free Energy Bound for Hard-Sphere Perturbation Theory
    K. K. Mon, University of Georgia/CIMS-NYU, kkmon@hal.physast.uga.edu

Finite-Sampling Errors in Computations of Free-Energy Differences and Other Non-Linear Averages: Rigorous Results and the Potential for Efficiency
    *D. M. Zuckerman and T. B. Woolf, John Hopkins School of Medicine, dmz@groucho.med.jhmi.edu

A Lattice Model of Hydrophobic Effect
    *P. Bhimalapuram, B. Widom, Cornell University, pb67@cornell.edu

Contact Angle at the First-Order Transition in Sequential Wetting
    *V. C. Weiss, Cornell University and Katholieke Universiteit Leuven, Belgium, volker.weiss@fys.kuleuven.ac.be, and J. O. Indekeu, Katholieke Universiteit Leuven, Belgium

Scaling Theory for the Farey Fraction Spin Chain Phase Transition
J. Fiala, *P. Kleban, and A. Ozluk, University of Maine, kleban@ maine.edu

Continuous Polymer Melting in Two Dimensions
*J. Kondev, Brandeis, kondev@brandeis.edu, and J. L. Jacobsen, Orsay

Heat Conduction in a Harmonic Chain with a Uniform Self-Consistent Heat Reservoir
*J. Lukkarinen, Rutgers/University of Helsinki, jlukkari@pcu. helsinki.fi, F. Bonetto and J. L. Lebowitz

Quantum Effects in a Model of Quantum Anharmonic Crystal
Y. Kozitsky, Maria Curie-Sklodowska University, Lublin, Poland, jkozi@golem.umcs.lublin.pl

Microscopic Derivation of a Scalar Caricature of the Relativistic Vlasov–Maxwell Equations
Y. Elskens, Univ. Aix-Marseille I, *M. Kiessling, Rutgers, miki@ math.rutgers.edu and A. Nouri, Univ. Aix-Marseille I

Selfconsistent Diamagnetism and Surface Currents
N. Angelescu, National Institute of Physics and Nuclear Engineering ''Horia Hulubei,'' Bucharest, Romania, nangel@theory.nipne.ro

Fluctuations of the Local Magnetic Field in a Frustrated Ising Model
*T. C. Dorlas and W. M. B. Dukes, Dublin Institute for Advanced Studies, dorlas@stp.dias.ie

Diffusion in Smectic Liquid Crystals with Screw Dislocations
R. Selinger, Catholic University, selinger@wsphd.phys.cua.edu

Zero Temperature Study of the Random Field Ising Model
I. Dukovsky and *J. Machta, University of Massachusetts, machta@ physics.umass.edu