

Program of the Statistical Physics at the 45th Parallel Meeting

October 18–19, 1996
Department of Physics and Astronomy
University of Rochester
Rochester, New York

This program was sponsored by the Eastman Kodak Company and the Department of Physics and Astronomy, University of Rochester.

Organizers: Dr. Yitzhak Shnidman, Eastman Kodak, and Yonathan Shapir and Stephen Teitel, University of Rochester.

Presentors are indicated by an asterisk.

Keynote colloquium

Joel L. Lebowitz, Rutgers University
Recent developments in non-equilibrium statistical mechanics

Invited talk

Krishnan Chari, Eastman Kodak
Polymer-surfactant assembly in bulk liquids and at interfaces

Session A. Contributed papers (Chair: Y. Shnidman)

Off-lattice model for lipid bilayer phases

Martin J. Zukermann, McGill

Convective-diffusive models of thermocapillary flows

Yitzhak Shnidman, Eastman Kodak

Interface erosion caused by Brownian vacancies

Zoltan Toroczkai, Virginia Tech.

A model for melt fracture in polymer melts

Joel Shore, Eastman Kodak

Relaxational dynamics of a random heteropolymer and a “protein”

Christine Villeneuve, McGill

An analytic approach to protein design

Skorobogatiy Maksim, McGill

Poster session

Effect of shear and substrate interactions on the wetting of liquid drops

Adil Khan, U. Rochester

Random sequential adsorption of line segments on a one-dimensional lattice: impurity effects

Jae Woo Lee, Clarkson

An avoidance model for short-range order induced by soft repulsions in systems of rigid rods

Donald Olbris,* Jining Han, and Judith Herzfeld, Brandeis

Stokesian dynamics simulation of the rheology of interacting solid particle dispersions

Dennis Perchak, Eastman Kodak

Fluctuations in polymer blends near the glass transition threshold

B. Veytsman* and S. Kumar, Penn State; J. Londono, ORNL

Effects of dipolar interactions on the long range order in Heisenberg FM bi-layers

Norberto Majlis, McGill

Invited talk

David Nelson, Harvard

Localization transitions in non-Hermitian quantum mechanics

Session B. Contributed papers (Chair: S. Teitel)

Non-equilibrium phases of driven CDWs and flux lattices

M. Christina Marchetti, Syracuse U.

Geometrical properties of a super-rough surface

Chen Zeng, Syracuse U.

Monte Carlo simulations of the random-field XY model

Michael Gingras, U. Waterloo

The mobility edge in a 2d quantum percolation problem

Martin Letz, Queens U.

Invited talk

Jacob Jorne, University of Rochester

Pattern formation in electrodeposition processes

Session C. Contributed papers (Chair: Y. Shapir)

Structure factors and their distributions in a simple three state lattice gas

Gyorgy Korniss, Virginia Tech.

Activation-relaxation technique: an event-based method for relaxation of continuous glasses

Normand Mousseau,* U. Montreal; Gerard T. Barkema, Princeton;

Laurent J. Lewis, U. Montreal

Matrix product eigenstates for reaction-diffusion models

Sven Sandow, Virginia Tech.

Hopping conduction in systems with strong electronic correlations

Eric Y. T. Lai, Queens U.

Universality class of two-species reactions and the role played by anisotropy

A. M. R. Cadilhe,* M. L. Glasser, and V. Privman, Clarkson

Exact solution of a driven irreversible spin exchange model on a line and phenomenological arguments for the decrease by one of the dynamical critical exponent

A. M. R. Cadilhe and V. Privman,* Clarkson

How quick is a quantum jump?

L. S. Schulman, Clarkson

A non-Hermitian Hamiltonian for quantum percolation

Jane Kondev, Brown U.