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PROGRAM OF THE 45TH STATISTICAL MECHANICS MEETING

Department of Mathematics
Rutgers University
May 7 and 8, 1981

The last semiannual Statistical Mechanics Meeting was held on May 7th and 8th. The next meeting is scheduled for December 17th and 18th, 1981. As usual these titles are informal and, in many cases, there is only one speaker listed although the work may have been done with collaborators. Also, the addresses are incomplete. Anyone who is interested in communicating with a speaker and who requires a more complete address may obtain it by writing to:

Dr. Joel L. Lebowitz
Department of Mathematics, Hill Center
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Surface Tension of Lattice Systems
Joel Lebowitz, Institute for Advanced Study and *Charles Pfister*, Ecole Polytechnique Fédérale

Correction to the Mean Field Critical Temperature for Kac Interactions in 3-Dimensions
Jean Bricmont, Princeton University *and J.-R. Fontaine*, Rutgers University

The Infrared Bounds and the Peierls Argument in 2-Dimensions
Jean Bricmont, Princeton University *and J.-R. Fontaine*, Rutgers University

On the Equivalence of Ensembles
Marc Pirlot, Universite de L'Etat a Mons and Rutgers University

Ising Model in a Magnetic Field
E. Barouch, Clarkson College of Technology

Ising Models on Hierarchical Lattices
Miron Kaufman and Robert B. Griffiths, Carnegie-Mellon University

Uniqueness of Multimeron Solutions of the Yang-Mills Equations
Basili Gidas, Institute for Advanced Study

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Convergence to Equilibrium of the Stochastic Heisenberg Model (and) Monotonicity of the Free Energy in the Stochastic Heisenberg Model
William D. Wick, University of Washington

Stochastic Models Exhibiting a Temperature Gradient
Claude Kipnis et al., Paris VII and Courant Institute

Nucleation Kinetics and the Becker-Döring Equation
Jan Tobochnik, Rutgers University

Long Tail of Sojourn Time Distribution in an Area-Preserving Map
S. R. Channon, Princeton Gamma-Tech, Inc. *and J. L. Lebowitz*, Institute for Advanced Study

How Universal is Feigenbaum's δ?
James B. McGuire, Florida Atlantic University, Boca Raton *and Colin J. Thompson*, Institute for Advanced Study, Princeton and University of Melbourne, Australia

Implicit Conditioning Method in Statistical Mechanics
John M. Richardson, Science Center, Rockwell International

A Few Results in Thomas-Fermi-von Weizsaecker Theory
Elliot Lieb, Princeton University

Are Crystals Equilibrium Structures
Charles Radin, University of Texas

Barrier Penetration at a Finite Temperature
Emil Mottola, Institute for Advanced Study

The Percus-Yevick Critical Point—Nonclassical Scaling and Anomalies
Shmuel Fishman and Michael E. Fisher, Cornell University

A Monte Carlo Study of the U_2 Chiral Model
Stuart Samuel, Institute for Advanced Study, Princeton

An Over-Relaxation Method for Thermalization of Multi-Quadratic Actions
Stephen Adler, Institute for Advanced Study, Princeton

Entropy Generation in a Cold Universe
Ed Witten, Princeton University

A Connection Between the Renormalization Group Hypothesis and a Random Walker
George A. Baker, Jr., Los Alamos National Laboratory

Triviality of ϕ_d^4 for $d > 4$
Michael Aizenman, Princeton University

The Kosterlitz-Thouless Transition
Thomas Spencer, Courant Institute, New York University

The Structure of Fluid Interfaces
Ben Widom, Cornell University

Round table on the roughening transition in lattice and continuum systems
Michael Azienman, Princeton University, *Jerome Percus*, Courant Institute, New York University, *Lawrence Schulman*, Technion and I.B.M., *John Weeks*, Bell Laboratories, *Michael Wertheim*, Rutgers Univ. (Movie on Percolation Analysis of Glactic Evolution by *Philip Seiden*, I.B.M.)

Frustrated Spin-Gas Model for Reentrant Liquid Crystals
A. N. Berker and J. S. Walker, Massachusetts Institute of Technology

Trasport in One-Dimensional Disordered Systems: The Problem of the Thermodynamic Limit
J. Sak and B. Kramer, Rutgers University

Diffusion in a Random System
I. Webman, Rutgers University

Fractal and Lacunary Random Walks
B. D. Hughes, M. F. Shlesinger, and E. W. Montroll, University of Maryland

A Scaling Theory of the Hall Effect in Disordered Electronic Systems
Boris Shapiro, Princeton University *and Elihu Abrahams*, Rutgers University

Transitions Induced by a Linear Defect in Self-Avoiding Walks and Percolation
Hisao Nakanishi, Cornell University

Incommensurate Phases in Asymmetric Clock Models
S. Ostlund, Cornell University

An Infinity of Commensurate Phases in the Asymmetric Clock Model
Julia M. Yeomans, Cornell University

Enhanced Symmetry in Critical Phases
Charles Newman, University of Arizona *and Lawrence Schulman*, International Business Machines

The Helical Potts Model for Commensurate—Incommensurate Transitions
M. Kardar and A. N. Berker, Massachusetts Institute of Technology

First and Second-Order Phase Transitions of the 20-State Potts Model in $D = 2$
D. Andelman, A. N. Berker, Massachusetts Institute of Technology, *and R. H. Swendsen.* International Business Machines Zurich Laboratory

Bicritical and Global Phase Diagrams of Chemisorption Systems
R. G. Caflisch and A. N. Berker, Massachusetts Institute of Technology

Corrections to Scaling via Partial Differential Approximants
Michael E. Fisher and Jing-Huei Chen, Cornell University

Localization
Elihu Abrahams, Rutgers University

Phases and Phase Transitions in an Adsorbed Layer
Bertrand Halperin, Harvard University

Criticality in the Yvon-Born-Green Equation in Four and Fewer Dimensions
Michael E. Fisher and Shmuel Fishman, Cornell University

Triple Criticality in Binary Fluid Mixtures with Orientational Correlations
James S. Walker, Henry Chou, Massachusetts Institute of Technology and *Chester A. Vause*, University of Pennsylvania

Exact Asymptotic Form of the Site-Site Direct Correlation Function for a Class of Rigid Polar Molecules
Peter T. Cummings and George Stell, Mechanical Engineering, S.U.N.Y. at Stony Brook

Finite Lattice Study of the Two-Dimensional ANNNI Model
G. O. Williams, P. Ruján, and H. L. Frisch, S.U.N.Y. at Albany

Critical Behavior of 2D ANNNI Models
P. Ruján, S.U.N.Y. at Albany

Lattice Gauge Models for Spin Glasses
R. Fisch, Washington University

A New Approach to Thermostatic Fluctuation Theory Using Path Integrals
George Ruppeiner, Amherst College

Dynamical Correlations in One-Dimensional Easy-Plane Magnets
M. Cieplak and A. Sjölander, Warsaw University and Rutgers University

Coupled Translational and Rotational Diffusion of Asymmetric Molecules in a Fluid
Ulrich R. Steiger and Ronald F. Fox, Georgia Institute of Technology

Square-Well Dilute Gas Transport Coefficients
John Karkheck and George Stell, S.U.N.Y. at Stony Brook

A Memory Function Equation Approach to the Kinetics of Spinodal Decomposition in the Early Linear Regime
Y. M. Wong and P. H. E. Meijer, Catholic University of America

Criterion for First-Order Phase Transitions
P. Kleban and Chin-Kun Hu, University of Maine

Equilibrium Polymerization as an Ising Model
Robert Cordery, Rutgers University

Polymer Conformations in Solution: A Different Model
Witold Brostow, Drexel University

Static Properties of Two-Dimensional Bulk Polymer Systems
Marvin Bishop, Fordham University, *David Ceperley*, Lawrence Berkeley Lab., University of California, *H. L. Frisch*, S.U.N.Y. at Albany, *and M. H. Kalos*, Courant Institute, N.Y.U.

Phase Diagram of an Ising Model with Random Sublattice Vacancies
Chin-Kun Hu and P. Kleban, University of Maine

Condensation of Disordering Objects in Abelian Spin and Gauge Systems
A. Patkós and P. Ruján, S.U.N.Y. at Albany

Vacancies in a Lattice Spin System: A Model for Liquid Crystals
Michael Lee, Courant Institute, N.Y.U.

New Families of Commuting Transfer Matrices in q-State Vertex Models
J. H. H. Perk and C. L. Schultz, S.U.N.Y. at Stony Brook