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PROGRAM OF THE 46TH STATISTICAL MECHANICS MEETING

Department of Mathematics
Rutgers University
December 17 and 18, 1981

The 46th semiannual Statistical Mechanics Meeting was held on December 17th and 18th. The next meeting is scheduled for May 13th and 14th. 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
Rutgers University
New Brunswick, New Jersey 08903

The Landau Model in Two-Dimensions
Detlef Dürr, Sheldon Goldstein, and Joel Lebowitz, Rutgers University

Equilibrium Time Correlation Functions for Some Stochastic Spin Systems
Herbert Spohn, Rutgers University

Euler Equations for Zero Range Interaction Model
Claude Kipnis, Ecole Polytechnique and Courant Institute

Microscopic Basis of Fick's Law for Color Self Diffusion
Joel Lebowitz and Herbert Spohn, Rutgers University

Invariant Measures and Homorphisms of Julia Sets, and Dynamical Systems
M. F. Barnsley, J. S. Geronimo, and A. N. Harrington, Georgia Institute of Technology

Orthogonal Polynomials with Respect to Invariant Measures on Julia Sets and Dynamical Systems
M. F. Barnsley, J. S. Geronimo, and A. N. Harrington, Georgia Institute of Technology

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Orthogonal Polynomials on Cantor Sets and Iterated Maps
D. Bessis, M. L. Mehta, and P. Moussa, Saclay

Intermittency in Area-Preserving Mappings
Albert B. Zisook, University of Chicago

Recurrence in Quantum Dynamical Systems
B. A. Huberman and T. Hogg, Xerox P.A.R.C.

Bizarre Behavior in Gases and Magnets
Talbot Michael Katz, Rockefeller University

Crossover in Potts ϕ^3 Field Theory with Quadratic Symmetry Breaking
Alba Theumann and Walter K. Theumann, University of Alabama

On the Sine-Gordon Theory in the First Few Regions of Collapse
G. Benfatto, G. Gallavotti, and F. Nicolo, University of Rome

Many-State Potts Models
Robert Israel, Rutgers University

A Correction to the Infrared Bounds
Jean-Raymond Fontaine, Rutgers University

A New Multicritical Point in Anisotropic Magnets in Both a Random and a Uniform Field
Serge Galam, City University of New York

Refutation of the Chudnovskys' Claim Concerning a Completely X-Symmetric Factorizable S Matrix in Terms of Theta Functions
Robert Shrock, SUNY at Stony Brook

An Infinite Set of Sum Rules for the Excitation Spectrum of One-Dimensional Spin Systems
Gerhard Müller, University of Rhode Island

Phase Transitions, Shock Waves, and Mean Field Bounds
Charles M. Newman, University of Arizona

A Dynamical Model of Percolation
David Wilkinson, Schlumberger-Doll Research

1) Dependence of the Electronic Energy of a Molecule on the Nuclear Coordinates. 2) Remarks on the Hohenberg-Kohn-Sham Density Functional Theory
Elliott Lieb, Princeton University

Statistical Procedures in Grand Unified Theories
Max Dresden, State University of New York at Stony Brook

Surface Tension and Crystalline Symmetry
Charles Radin, University of Texas

Behavior of Nearest Singularities for 2-Dimensional Ising Model
Michael Coopersmith, University of Virginia

Instanton Configuration of Unit Topological Charge in Two-Dimensional Heisenberg Model with $X-Y$ Like Anisotropy
Indubala Indradev Satija and R. Friedberg, Columbia University

The Topological Conjugacy Problem for Henon-Like Mappings
Charles Tresser, Courant Institute

Divergence of the Susceptibility for Ferromagnetic Ising Models at First-Order Transitions
Peter Kleban, University of Maine

Rigorous Results on the Phase Diagram of the Ising Spin Glass
Hidetoshi Nishimori, Carnegie-Mellon University

On the Nature of Ordering in Spin Glasses
J. R. Banavar, Bell Laboratories *and M. Cieplak*, Rutgers University

Borel Summability of $1/n$ Expansion for Classical Spin Systems
J. Fröhlich, H. Mardin, and V. Rivasseau, Institute for Advanced Study

Convexity Violations for Noninteger Parameters in Potts and N-Vector Models
R. B. Griffiths and P. D. Gujrati, Carnegie-Mellon University

Some Comments on the ϕ_4^4 Field Theory
Michael Aizenman, Princeton University

Isotropic and Anisotropic N-Vector Models by Wilson's Exact Renormalization-Group Equation
E. K. Riedel and K. E. Newman, University of Washington

Euler Invariances for Partial Differential Approximants
Daniel F. Styer and Michael E. Fisher, Cornell University

Is the Spin One-Half Ising Model in 3-Dimensions Anomalous?
Bernhard G. Nickel, University of Guelph and Harvard University

Critical Phenomena—A Marriage of Statistical Mechanics and Field Theory
George A. Baker, Jr., Los Alamos National Laboratory

The Nature of the Glass Transition
Morrel H. Cohen, Exxon Research & Engineering Co.

Round Table on Problems Related to Short Wave Length Lasers
James Forsyth, University of Rochester, *Bill Silfvast*, Bell Laboratories, *Szymon Suckewer*, Princeton Plasma Physics Lab., *and Michael Stroscio*, Air Force Office of Scientific Research

The Structure of the Percolative Cluster and the Crossover Exponent in Dilute Ferromagnets
Antonio Coniglio, Boston University

Structure of the Glassy State
S. T. Chui, G. O. Williams, and H. L. Frisch, Courant Institute

Order and Deterministic Chaos in Models of Two-Dimensional Amorphous Solid
Michael Rubinstein and David R. Nelson, Harvard University

Phase Transitions of Diluted Potts Models and Potts–Glasses
Ikuo Ono, Boston University

Is There a Phase Transition in the 3-State Antiferromagnetic Potts Model on a Square Lattice?
Jan Tobochnik and C. Jayaprakash, Rutgers University

The Order-Parameter Profile for the Extraordinary Transition and for the Critical–Noncritical Interface
David Jasnow and Joseph Rudnick, University of Pittsburgh

Surface Critical Behavior in Inhomogeneous Semi-Infinite Systems
T. W. Burkhardt and I. Guim, Temple University

Critical Property of an Altered Ising Model
Alan Brown, Boston University

Criticality of Fluids Between Plates
H. Nakanishi and M. E. Fisher, Cornell University

Light Scattering Near a Convective Instability
T. Kirkpatrick and E. G. D. Cohen, Rockefeller University

Connection Between Statistical Mechanics and Multivariate Optimization
S. Kirkpatrick and C. D. Gelatt, Jr., I.B.M. Thomas J. Watson Research Center

Kondo Model: Exact Diagonalization and Finite Temperature Thermodynamics
W. Andrei, Rutgers University *and V. T. Rajan*, New York University

A Simple, Unexpected Route to the Free Energy of Baxter and Baxter-Like Models
R. Shankar, Yale University

Statistical Mechanical Modeling for Water and Aqueous Solutions
Frank Stillinger, Bell Telephone Laboratories

Interpretation of the Unusual Behavior of H_2O and D_2O at Low Temperature: Are Concepts of Percolation Relevant to the "Puzzle of Liquid Water"?
H. Eugene Stanley, Boston University

Exact Solution of the Mean Spherical Approximation for a Quantum Polarizable Fluid
David Chandler, K. S. Schweizer, and M. J. Thompson, Massachusetts Institute of Technology

The Analytic Solution of the Percus-Yevick and Mean Spherical Approximations for Potentials of Finite Range
John W. Perram, SUNY at Stony Brook

Phase Equilibria in Polydisperse Fluids
J. A. Gualtieri, J. M. Kincaid, and G. Morrison, National Bureau of Standards

The Exact Asymptotic Form of the Site-Site Direct Correlation Function for Molecular Fluids: Rigorous Results for Diatomics and Triatomics
P. T. Cummings, G. Stell, and D. Sullivan, SUNY at Stony Brook

Site Binding to Polyions Including Intercalation Into DNA
Richard A. Friedman and Gerald S. Manning, Rutgers University
Physics of the Dynamical Critical Exponent in One Dimension
Robert Cordery, Sanjoy Sarker, and Jan Tobochnik, Rutgers University
Prospects for Implicit Moment Simulation of Plasmas
Rodney J. Mason, Los Alamos National Laboratory
New Results on Strongly Coupled Plasmas
Gabor J. Kalman, Paul Carini, and R. Genga, Boston College, *Kenneth Golden*, Northeastern University
Fractal Diagrams for Hamiltonian Stochasticity
George Schmidt, Stevens Institute of Technology
Mixing in Some Simple 1-*D* Maps
Boris Shraiman, Harvard University
Scaling Theory for Noisy Period-Doubling Transitions to Chaos
Boris Schraiman, C. Eugene Wayne, and Paul C. Martin, Harvard University
Chaotic States in Statistical Mechanics
E. Fradkin, O. Hernandez, B. A. Huberman, and R. Pandit, Cornell University
A Simple Model of Pattern Selection in Eutectic Solidification
J. S. Langer, V. Datye, and R. Mathur, Carnegie-Mellon University
Pattern-Forming Instabilities in a Directional-Solidification Model: The Low-Solubility Limit
Douglas A. Kurtze, Carnegie-Mellon University
The Amplitude Equation Approach to Directional Solidification
Gregory Dee, Carnegie-Mellon University
Rapid and Not Rapid Cooling of Supercooled Liquids
Paul H. E. Meijer and Y. M. Wong, Catholic University of America
Monte Carlo Simulation and Boundary Conditions
N. Jan and D. A. Pink, St. Francis Xavier University
Excitation Spectrum and $T = 0$ Dynamics of 1-*D* Anisotropic Anti-Ferromagnet
Mahalingam Mohan and Gerhard Müller, University of Rhode Island
The $\mathrm{Exp}(-\phi t^3)$ Decay of Amplitude Correlations in a Markoffian Process
Shalom Baer, University of Chicago
Memory Effect on Thermally Activated Escape Rate
Peter Hanggi, Polytechnic Institute of New York
Critical Properties of the Syozi Model at $T = 0$
Chin-Kun Hu, University of Toronto