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Here are the titles presented at the semiannual Statistical Mechanics Meeting held in December 1996. The meeting was dedicated in part to honor Ilya Lifshitz on the occasion of the 80th anniversary of his birthday. As usual these titles are informal and, in many cases, there is only one speaker listed, although the work may have been done by many collaborators. Also, the addresses are incomplete, but e-mail addresses are provided if you are interested in communicating with a speaker.

Information about past and future meetings, as well as positions available and names of people looking for positions, can be obtained from a file labeled smm which you will be able to reach directly by anonymous ftp to "math.rutgers.edu," give "anonymous" as user name and give your email address as the password. You should switch to appropriate directory by "cd pub/smm." Alternatively, this file can be reached via WWW browser at the URL file://math.rutgers.edu/pub/smm.

Joel L. Lebowitz

REVIEW TALKS

I. M. Lifshitz' Results in Continuum Theory of Phase Transformations in Solids

M. Grinfeld, Educational Testing Service, Princeton, mgrinfeld@ets.org
SOL-GEL Transition in Weak Gels as a Genuine Phase Transition Due to Spontaneous Breaking of Monomers' Identity

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0022-4715/97/0700-0525$12.50/0

On the Lifshitz-Slyozov Theory of Coarsening in Alloys
O. Penrose, Heriot-Watt University, oliver@ma.hw.ac.uk
Statistical Mechanics of Cracks
M. Marder, University of Texas, marder@stratus.ph.utexas.edu
Singularities in Long wave Unstable Interface Equations
A. Bertozzi, Duke University, bertozzi@math.duke.edu
Localization of Surface Waves: An Exactly Soluble Model
L. Pastur, Institute for Low Temperature Physics, Ukraine, and University Paris VII, pastur@mathp7.jussieu.fr
Some Remarks about the Work of Alexander Slutskin
L. Pastur, Institute for Low Temperature Physics, Ukraine, and University Paris VII, pastur@mathp7.jussieu.fr
Chaos in Cosmology
I. M. Khalatnikov, Tel Aviv University and Landau Institute, khalat@khalat.ls.ac.ru
Lifshitz Resonant Tunneling as the Mechanism of c-Axis Transport in High-Temperature Superconductors
A. Abrikosov, Argonne National Laboratory, alex_abrikosov@qmgate.anl.gov
Lifshitz-Kosevich Oscillations in Superconductors at Fields Well Below Hc2
L. Gorkov, Florida State University and L. D. Landau Institute, gorkov@magnet.fsu.edu
Bose-Condensation and Superconductivity in Mesoscopic Systems: Spontaneous Violations of Homogeneity of Time, Spatial Rotations on Angle 2π, etc.
A. F. Andreev, P. L. Kapitza Institute, Moscow, andreev@kapitza.ras.ru
Exact Correlations and Transport Properties in Quantum Impurity Problems
H. Saleur, University of Southern California, saleur@diderot.usc.edu

MEMORIAL SESSION TO I. M. LIFSHITZ, Y. SINAI, CHAIR

The Life and Scientific Work of Ilya Lifshitz
A. Grosberg, MIT, shura@gels.mit.edu and M. Kaganov, 102441.1021@compuserve.com
Talks by I. M. Khalatnikov, L. Pastur, Mrs. Zoya Lifshitz, and other conference participants
Renormalization Group for Fermions: An Introduction
R. Shankar, Yale University, shankar@genesis6.physics.yale.edu
Random Matrices: From 2D Quantum Gravity to Disordered Systems
E. Brezin, ENS brezin@peterpan.ens.fr

Random Matrix Theory of Impurity-Band Tails: An Old Problem Revisited
J. L. Birman, CUNY, birman@scisun.sci.ccny.cuny.edu
Random Matrix Approach for Words Enumeration in the Braid Groups
S. Nechaev, Institute of Theoretical Physics of the Russian Academy of Sciences, nechaev@landau.ac.ru
Growth Induced Imperfections in Protein Crystals
A. A. Chernov, Universities Space Research Association, achernov@space.hsv.usra.edu
Statistical Mechanics of Ion-Containing Polymers
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Long-Range Forces in a Polymer Melt: Polymer-Magnet Analogy
S. Obukhov, University of Florida, sergei@phys.ufl.edu
Renormalization Approach to the Kinetic Description of Chaotic Dynamics
G. Zaslavsky, New York University, zaslav@math1.cims.nyu.edu
On The Distribution of Maximum of Fractal Brownian Motion
Y. Sinai, Princeton University, sinai@math.princeton.edu
Some Thoughts on the Evolution of Independent Entities
P. W. Anderson, Princeton University, esz@pupgg.princeton.edu
Random Walks on Microtubules
C. Peskin, Courant, peskin@mcqueen.cims.nyu.edu
DNA and Recognition
A. Libchaber, Rockefeller University, libchbr@rockvax.rockefeller.edu
Harnessing the Hubris: a Wishlist of Useful Things Physicists Can Do in Biology
A. Parsegian, NIH, vap@cu.nih.gov
Why Do Proteins Look Like Proteins?
C. Tang, NEC, tang@research.nj.nec.com
Statistical Mechanics of Protein Folding, Design and Evolution
E. Shakhnovich, Harvard University, eugene@diamond.harvard.edu
Cellular Protein Folding: How Nature Beats Topological Frustration
D. Thirumalai, University of Maryland, thirum@ipst.umd.edu
Combinatorial Methods for Protein Design: Novel Proteins by the Dozen
M. Hecht, Princeton University, hecht@bigsgi.princeton.edu
Partition Functions of Biomolecules and Other Compact Polymers
K. Dill, University of California, San Fransisco, dill@maxwell.ucsf.edu
Thermodynamics versus Kinetics in Protein Folding
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Specificity and Affinity of Biomolecular Interactions
M. Frank-Kamenetskii, Boston University, mfk@enga.bu.edu
Conformations of Charged Heteropolymers
M. Kardar, MIT, kardar@cmt7.mit.edu
Freezing Transition of Compact Polyampholytes
V. Pande, Berkeley University, vijay@hubbell.berkeley.edu

Spectral Analysis of Biological Sequences
D. Torney, Los Alamos National Laboratory, dct@ipmati.lanl.gov
Physics from Jelly Fish
E. Siggia, Cornell University, siggia@msc.cornell.edu
Modeling Cellular Guts with Colloidal Soups
S. Fraden, Brandeis University, seth@smectic.elsie.brandeis.edu
Cell Dynamics of Model Proteins
M. Cieplak, Polish Academy of Sciences, ciepla@delta1.ifpan.edu.pl
Ideal Geometric Forms of Knots and Equilibrium Trajectories of Knotted Polymers
A. Stasiak, Lausanne, Andrzej.Stasiak@lau.unil.ch

SHORT COMMUNICATIONS

The Brownian Vacancy Driven Walk
Z. Toroczkai and R. K. P. Zia, Virginia Tech, toro@aura.phys.vt.edu
Matrix Product States for Reaction-Diffusion Models
H. Hinrichsen, K. Krebs, I. Peschel and S. Sandow, Virginia Tech, sandow@dds.phys.vt.edu
Growth Model with Continuous Set of States
A. Toom, University of the Incarnate Word, toom@the-college.iwctx.edu
Neel Order in the Ground State of Heisenberg Antiferromagnetic Chains with Long Range Interactions
J. R. Parreira, Princeton University, O. Bolina and J. F. Perez, University of Sao Paulo, parreira@math.princeton.edu
The Low Activity Phase of Some Dirichlet Series
P. Contucci, Princeton University, contucci@math.princeton.edu and A. Knauf, Technische Universitat, Berlin
Exact Results for Quantum Phase Transitions in Random XY Spin Chain
R. H. McKenzie, University of New South Wales, Australia, ross@newt.phys.unsw.edu.au
Effect of Random Fields on Critical Asymptotics. Exactly Solvable Model
D. Nicolaides, Bloomfield College, Dnicola@aol.com, and A. A. Lisyanski, Queens College
The Low-Temperature Rate of Electron Capture Beta Decay in Hydrogen-Like Ions
L. M. Folan and V. I. Tsifrinovich, Polytechnic University, Brooklyn, vtsifrin@duke.poly.edu
Localized States of Electromagnetic Waves in Impure Crystals
L. I. Deych and A. A. Lisyansky, Queens College of CUNY, aal$phys@qc1.qc.edu

Use of Link Energy for Calculation of the Probability of Entanglement between Two Closed Random Walks

A. Kholodenko, Clemson University, string@mail.clemson.edu

Shapes of Random Walks

A. Beldjenna, Paris

Spinodal Decomposition in Polymer Melts: An Explanation for Pinning During Coarsening

Weinan E, NYU, P. Palffy-Muhoray, Kent State University, and F. Otto, NYU, ottof@boheme.cims.nyu.edu

Asymptotically Exact Results for a High-Field Dynamics of Polymers in a Repton Model

A. B. Kolomeisky, abk7@cornell.edu, and B. Widom, Cornell University

Supersymmetric Methods for Microtubules

H. C. Rosu, IFUG, Mexico

The High-Pressure, Supercritical, Gas-Liquid Phase Transition in Real Fluids

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Experimental Evidence of a Liquid-Gas Phase Transition in Excited Gold Nuclei

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Quasistatic Properties of Metastable States

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Statistical Mechanics of Ideal Fluid

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Quantum Breaking of Elastic String

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Fracture in One Dimension via Quantum Tunneling

E. B. Kolomeisky, Cornell University, phy139@msc.cornell.edu, and J. P. Straley, University of Kentucky

Coulomb Blockade of Tunnel-Coupled Quantum Dots

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Band Crossing and Magnetic Breakdown in the Dirty Limit

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Topological Equilibrium in Closed DNA Molecules: Applications to Studies of DNA Supercoiling and Action of Topoisomerases

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Stick-Slip Motion and Noise Induced Lubrication
H. G. E. Hentschel, F. Family and Y. Braiman, Emory university, phshgeh@physics.emory.edu

Theory of Quasistatic Crack Propagation
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Crack Propagation through Heterogeneous Media
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Oscillatory Non-Arrhenius Behavior of the Rate of Noise-Induced Escape through an Unstable Limit Cycle
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Cooperating with Nonequilibrium Fluctuations through Their Optimal Control
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Magnetic Oscillations and Magnetic Breakdown in Molecular Conductors
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Discontinuous Particle Demagnetization at Low Temperature
J. Marro and J. A. Vacas, University of Granada, jmarro@goliat.ugr.es

Dynamics of Disordering by Brownian Vacancies
Z. Toroczkai, G. Korniss, B. Schmittmann and R. K. P. Zia, Virginia Tech, schmittm@vt.edu

Asymmetries in Structure Factor Histograms
G. Korniss, B. Schmittmann and R. K. P. Zia, Virginia Tech, korniss@aura.phys.vt.edu

Domain Patterns in the Systems with Long-Range Competing Interaction Near Critical Points
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Critical Holes in Undercooked Wetting Layers
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Surface Critical Behavior of Binary Alloys and Antiferromagnets: Dependence of the Universality Class on Surface Orientation
A. Drewitz, R. Leidl, T. W. Burkhardt, Temple University, V5328E@VM.TEMPLE.EDU, and H. W. Diehl, Universitaet Essen

Flattening of a Profile Imprinted on a Crystal Surface Below the Roughening Phase Transition
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Renormalization-Group Calculation of Local Magnetizations and Correlations: Random-Bond, Random-Field, and Spin-Glass Systems
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Phase Transition in Lattice Surface Systems with Gonihedric Action
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Diffusion Velocity of the Repton Model of the Gel Electrophoresis
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Aggregation in Systems with Long-Range Interactions
I. Ispolatov, P. Krapivsky and S. Redner, Boston University

Effective Hamitonian Analysis of Coulombic Fluids
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Renormalization-Group Study of Superfluidity and Phase Separation of Helium Mixtures Immersed in Jungle-Gym Aerogel
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Power-Law Correlated Phase in Random-Field XY Models and Randomly Pinned Charge-Density Waves
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Relaxation of Disordered Magnets in the Griffith' Regime
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Strong Violation of Universality under Quenched Bond Randomness
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Duality of the Calogero Model
L. Tevlin, CUNY, lenny@scisun.sci.ccny.cuny.edu, and J. L. Birman

On Continuous-Time Random Walk
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Some Results for Semi-Directed Percolation
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There Are No Infinite Geodesics in the First Passage Percolation on a Half-Plane
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Levitation of Extended States and Localization Transition in Two Dimensions
K. Yang, Princeton University, kunyang@ee.princeton.edu, R. N. Bhatt and F. D. M. Haldane, Princeton University

Distribution of Normalized Spacings between Nearest Eigenvalues of Large Random Matrices: Gaussian Fluctuation for Their Empirical Distribution Function
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Localization for a Class of Discrete Schrödinger Operators with Quasi-periodic Surface Potentials

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Coding by Means of a Spin-Glass

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Asymmetric Neural Nets and Immune System

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The Random Link Approximation for the Euclidean Traveling Salesman Problem

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Critical Behavior of the Diluted Contact Process

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Self-Dual Yang Mills v/s Bethe Ansatz

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Knot Theory and Correlation Functions in Two-Dimensional Conformal Field Theory

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Non-Periodic Long-Range Order for One-Dimensional Pair Interactions

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Comparison of Lattice Models of Hydrogen Bonding

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Decay Rate of Ortho-Positronium in Fluids

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Black Hole Precursors in a One Dimensional Gravitating System

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Equipartition Doesn't Imply Ergodicity: An Example

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Entropic Forces in Binary Hard Sphere Mixtures

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Charge Oscillations from Generalized Debye-Hueckel Theory

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Multiple Conformations in Polyampholytes
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Correlated Energy Landscape of Protein Folding Funnel
J. Wang, NIH

An Effective Field-Theory Approach to Persistent Currents
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Quantum Dephasing of Normal Modes of a Bose-Einstein Condensate in a Magnetic Trap
A. B. Kuklov, N. Chencinski, A. M. Levine and W. M. Schreiber, The College of Staten Island, CUNY, and J. L. Birman, The City College, CUNY, abk@bluebird.apsc.sci.cuny.edu

Dynamical Scaling in the Phase Segregation of Binary Fluids
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Mathematical Issues in the Theory of Stochastic Ratchets
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Boltzmann-Grad Limit for a Particle System in Continuum
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Non Hermitian Localization and Burgers Equation
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Peierls Argument for Ising Model in High Dimensions
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Conjectures on Nonequilibrium Ensembles in Statistical Mechanics
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Exact Transport Coefficients for a 2-Parameter Class of Piecewise Linear Circle Maps
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Renormalization Methods in Differential Equations
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Earthquake Failure Sequences along a Disordered Fault Zone in Three Dimensions and in Mean-Field Theory
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Spatiotemporal Chaos in Rayleigh-Benard Convection Scales
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Invaded Cluster Methods: A Quick Introduction
L. Chayes, UCLA, J. Machta and Y. Choi, UMASS, A. Lucke, Freiburg, and T. Schweizer, Ulm, lchayes@math.ucla.edu
Applications of Invaded Cluster Methods to Large Scale Simulations of Potts/Ising Models
Y. Choi, J. Jiang and J. Machta, UMASS, L. Chayes, UCLA, and P. Tamayo, Thinking Machines, machta@phast.umass.edu
Invaded Cluster Simulations of the Widom-Rowlinson Model
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