

Program of the Fourth Statistical Physics Days

Istanbul Technical University,
17–18 July 1997

q-Mechanics of Random Sets

Metin Arık (Bosphorus University)

Non-Commutative Geometry and Irreversibility

Ayşe Erzan (I.T.U.)

A New Formalism for Nonextensive Physical Systems: Tsallis Thermostatistics

Uğur Tirnaklı (Ege University)

Statistical Physics, Neural Networks, Brain Studies

Gérard Toulouse (École Normale Supérieure)

Neural Classifiers for Learning Higher-Order Correlations

Marifi Güler (M.E.T.U.)

Ordering due to Disorder in Frustrated Quantum Magnetic Systems

Taner Yıldırım (University of Maryland and N.I.S.T.)

Renormalization-Group Calculation of Local Magnetizations and Correlations:
Random-Bond, Random-Field, and Spin-Glass Systems

Dicle Yeşiltekin (M.I.T.)

Experimental Determination of β , γ , and ρ Critical Exponents in the Sol-Gel
Phase Transition Using the Steady-State Fluorescence Technique

Yaşar Yılmaz (I.T.U.)

Statistical Determination of the Degree of Mixing of a Binary Powder
Mixture: Numerical Example and Implementation

Orhan Vaizozlu (ORVA and E.T.H.)

Extremal Segments in Random Sequences

Deniz Ertuş (Harvard University)

Dynamics of Elastic Manifolds under Strong Pinning and Driving Forces

Muhittin Mungan (University of Chicago)

Dielectric Formulation of the Three- and Two-Dimensional Quantum
Many-Electron Systems

Mehmet Tomak (M.E.T.U.)

Magnetic Excitations in Random Anisotropic Magnets

İbrahim Avgın (Ege University)

Weak Localization in Disordered Two-Dimensional Crystals with Half-Filled Band

Enver Nakhmedov (I.T.U.)

SHORT TALKS

(When more than one author, the speaker is indicated by an asterisk)

Monte Carlo Simulations on Time Dependence of Bond Formation Probability p during Sol-Gel Phase Transitions

Erkan Tüzel,* M. Serdar Özmetin, and Yaşar Yılmaz (I.T.U.)

Fluorescence and Dilatometric Techniques for Determination of the Gel Point in the Free-Radical Crosslinking Copolymerization of Styrene and Divinylbenzene

Demet Kaya,* Oğuz Okay, and Önder Pekcan (I.T.U.)

Photon Transmission Technique for Studying the Evolution of Transparency of Films Formed by Hard Latex Particles

Ertan Arda* (Trakya University), Erhan Pişkin (Hacettepe University), and Önder Pekcan (I.T.U.)

Determination of Relaxation and Diffusion Activation Energies during Dissolution of Latex Film Using In-Situ Fluorescence Technique

Şaziye Uğur* and Önder Pekcan (I.T.U.)

Fluorescence Technique to Study Multiple Phase Transitions in Liquid Crystals

Sevtap Yıldız* (I.T.U.), Arif Nasrullayev (Ege University), Yaşar Yılmaz, and Önder Pekcan (I.T.U.)

Swelling Studies in Acrylamide-Bisacrylamide Gels

Huceste Giz (I.T.U.)

Quasicrystalline Related Phase Transitions at the Surface of Al_3Pd

B. Bolliger, Mehmet Erbudak,* M. Hochstrasser (E.T.H.), A. Refik Kortan (Bell Labs.), and M. Zurkirch (E.T.H.)

Scaling and Universality for Submonolayer Epitaxy

Dimitri D. Vvedensky (Imperial College)

q-Distributions and Molecular Beam Epitaxy

Jak Kornfilt (Bosphorus University)

Interface Dynamics with Finite Inertia

Öncü Kayalar* and Ayşe Erzan (I.T.U.)

Surface Segregation in Binary Alloys

Umut Gürsoy* and Ayşe Erzan (I.T.U.)

Magneto-resistivity of Silver and Silver-Zirconium as Sheathing High-Temperature Superconductivity

Osman Dur,* Ömer Asım Saçlı (Marmara University), Bekir Aktaş (Gebze High Technology Inst.), Yusuf S. Hasççek, and S. W. Van Sciver (Florida State University)

^{19}F NMR Study of Flux-Line Dynamics in Fluorinated $\text{YBa}_2\text{Cu}_4\text{O}_8$

Fügen Tabak* (Hacettepe University) and Maurizio Corti (University of Pavia)

Variable Valence and Superconductivity in Fullerides

Taner Yıldırım (University of Maryland and N.I.S.T.)

Ground-State Correlations in Semiconductor Double-Quantum-Wire System

Nihal Mutluay* and Bilal Tanatar (Bilkent University)

Plasmon-LO-Phonon Coupling Effects on the Drag Rate in Double-Quantum-Well Systems

Kaan Güven* and Bilal Tanatar (Bilkent University)

A Tight-Binding Model for bcc Iron with Magnetic Interactions

Dicle Yeşiltepe* and Tomás Arias (M.I.T.)

A Pseudopotential Study of the Structural Properties of Noble Metals

Serap Dalgıç,* Seyfettin Dalgıç (Trakya University), and Mehmet Tomak (M.E.T.U.)

Simulation of Thermal and Mechanical Properties of fcc Metals and their Binary Alloys

Tarık Çağın (Cal.Tech.), Gülay Dereli,* Mustafa Uludoğan, and Mehmet Tomak (M.E.T.U.)

Resistivity Anomaly in the CrFe Amorphous Films

Yıldırhan Öner* (I.T.U.) and Mustafa Özdemir (Marmara University)

Investigation of Geometrical Anisotropy of Reentrant $\text{Ni}_{77}\text{Mn}_{23}$ Films by SWR

Mustafa Özdemir* (Marmara University), Bekir Aktaş (Gebze High Technology Inst.), and Yıldırhan Öner (I.T.U.)

On the Electrolytic Conductivity, Debye-Hückel Theory and the Onsager Limiting Law

Mustafa Çetin (I.T.U.)

Structure of Liquid Alkali Metals Calculated by the Integral Equation Approach

H. Birtan Kavanoz* and İdris Gümüş (Yıldız Technical University)

Thermodynamic Calculations for Liquid Sodium-Potassium

Mehmet Yılmaz* and Seyfeddin Karagözlü (Yıldız Technical University)

Structure of Partly Quenched Molten Metal Chlorides

Hasan Tatlıpınar (Yıldız Technical University)

Kosterlitz-Thouless Phase Transition or Asymptotic Freedom in Two-Dimensional $O(N)$ Spin Systems

Mehmet Dilaver* (Hacettepe University), Bartolemeo Alles, Giancarlo Cella (Pisa University), and Yiğit Gündüç (Hacettepe University)

Phase Transitions and Dual Superconductivity in Lattice Gauge Theories
Burcu Ortakaya* and Yiğit Gündüç (Hacettepe University)

Scaling of the d -Dimensional $O(N)$ Sigma Models

Mehmet Dilaver* (Hacettepe University), Paolo Rossi (Pisa University), and Yiğit Gündüç (Hacettepe University)

Softening of Phase Transition in Potts Model under Quenched Bond Randomness

Fatih Yaşar,* Yiğit Gündüç, and Tarık Çelik (Hacettepe University)

Frustrated Antiferromagnetism with Multiple-Q Structure

Ali Bayrı* (İnönü University), Servet Ekmekçi (Trakya University), and Hüseyin Gencer (İnönü University)

Frustration and Magnetic Phase Transition

Hüseyin Gencer,* Ali Bayrı (İnönü University), and Servet Ekmekçi (Trakya University)

Linear Fractional Near-Identity Transformations in Second-Order Normal Form Calculations

F. Gülay Fırat Acar (I.T.U.)

Application of the Kincaid-Cohen Method to a Binary Gas-Liquid System

Paul H. E. Meijer (Catholic University) and Mustafa Keskin* (Erciyes University)

The Phase Diagram of the Antiferromagnetic Blume-Capel Model Calculated by the Cluster Variation Method

Mustafa Keskin (Erciyes University) and Orhan Yalçın* (Gaziosmanpaşa University)

Stable, Metastable, and Unstable Solutions of the Blume-Emery-Griffiths Model

Mustafa Keskin (Erciyes University) and Cesur Ekiz* (Gaziosmanpaşa University)

Non-Linear Dynamical Critical Exponents of the Ising Model in Five to Seven Dimensions

Nevzat Aktekin (Gazi University)

Dynamical Behaviour of the Diffusion on the Cellular Automaton of Chopard-Droz-Kolb

Şeref Turhan,* Mahmut Eken (TAEK ANAEM), and Nevzat Aktekin (Gazi University)

The Effect of Varying the Rules for the Cellular Automaton of Chopard-Droz-Kolb for Diffusion

Mahmut Eken,* Şeref Turhan (TAEK ANAEM), and Nevzat Aktekin (Gazi University)

Equilibrium Fluctuations in Attractors Embedded in Three Dimensions

Ali Ranâ Atılgan (Bosphorus University)

Local and Ensemble Forecasting of Chaotic Time Series

A. Kürşat Alparslan,* Mehmet Sayar, and Ali Ranâ Atılgan (Bosphorus University)

Identification of Native Conformations of Proteins Using a Low Resolution Model

Banu Özkan* and İvet Bahar (Bosphorus University)

Packing of Side Chains in Native Protein Structures

Özlem Keskin* and İvet Bahar (Bosphorus University)

A Sequence Specific Low Resolution Model of DNA

Mehmet Sayar* and Ali Ranâ Atılgan (Bosphorus University)

Similarity between Relaxation Phenomenon and Combinatorial Optimization Problem

Ekrem Aydın* and Kerim Kıymaç (Çukurova University)

Motion of Three Inelastic Particles

Muhittin Mungan (University of Chicago)

Global Random-Field Spin-Glass Phase Diagrams in Two and Three Dimensions

Gabriele Migliorini and A. Nihat Berker* (M.I.T.)

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