

Program of the Fifth Statistical Physics Day

Istanbul Technical University, 16–17 July 1998

Fullerenes

A. Refik Kortan (Bell Laboratories)

Breaking $SO(3)$ to Its Closed Subgroups by Higgs Mechanism: Liquid Crystals and Cosmic Strings

Mehmet Koca (Sultan Qaboos University)

Structure and Bonding of Rare-Earth Fullerenes

Engin Özdaş (Hacettepe University)

Phase Field Model for Supercooled Solidification

Mete Soner (Bosphorus University)

Quenched Disorder in Finite Spin Systems

Yiğit Gündüç (Hacettepe University)

Fuzzy Statistics in Social and Opinion Research

Erkani Keyman (DAP Marketing Research, Inc. and Trakya University)

The Molten State of Trivalent Metal Halides and Oxides: Recent Progress

Zehra Akdeniz (Trieste International Centre for Theoretical Physics and Istanbul University)

Recent Developments in the Theory of Ionic Liquids: Application to Molten Alkali Halides

Çetin Taşseven (Yıldız Technical University)

Structure of Glasses Studied by Modulated Temperature Differential Scanning Calorimetry

Safa Kasap (University of Saskatchewan)

Electrical Properties and Structure of Biological Cells

Emine Demirel Yılmaz (Ankara University)

One-Body Transport Description of Nuclear Dynamics

Şakir Ayık (Tennessee Technological University)

SHORT TALKS

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

Study of the Molecular Weight Effect on Latex Film Formation by the Photon Transmission Technique

Ertan Arda* (Edirne University) and Önder Pekcan (I.T.U.)

Transient Fluorescence Technique for Modelling of Swelling in Poly Methylmethacrylate (PMMA) Gels

Matem Erdoğan,* Demet Kaya, and Önder Pekcan (I.T.U.)

UV Spectroscopy Technique for Studying Multiple Phase Transitions in Liquid Crystals

Sevtap Yıldız,* Haluk Özbek, and Önder Pekcan (I.T.U.)

Ultrasonic Chain Scission

Murat Sunar,* Huceste Çatalgil-Giz, and Ahmet Giz (I.T.U.)

Dielectric Investigation of the Irreversible Sol-Gel Transformation in Acrylamide/Bisacrylamide System

Ferit Salehli, Huceste Çatalgil-Giz,* Ahmet Giz, and Baki Altuncevahir (I.T.U.)

Viscous Behavior of Hydrocarbons: Linking the Equilibrium and Transport Theories

Uğur Yahşi (Marmara University)

Protein Folding

Sencer Taneri* and Cemal Yalabık (Bilkent University)

Dewetting of Glassy Liquid Crystalline Films Induced by Interfacial Restructuring

Levent Demirel* (Koç University) and Blandine Jerome (Amsterdam University)

System Size Effects in Surfaces Formed by Sedimentation

Levent Kurnaz* (Bosphorus University), Grant Tregre, and Kathleen McCloud (Xavier University)

Pharmacosomes: Colloidal Dispersions of Drugs Covalently Bound to Lipids

Orhan Vaizoğlu (ORVA İlaç Sanayi Ticaret A.Ş.)

Factorization Approximation for Generalized Distribution Functions and Bounds upon Nonextensivity Parameter

Uğur Tırnaklı,* Fevzi Büyükkılıç, and Doğan Demirhan (Ege University)

Scaling Behaviour in the Dynamics of Pinned Interfaces with Inertia

Öncü Kayalar* (I.T.U.) and Ayşe Erzan (I.T.U. and F. Gürsey Research Institute for Basic Sciences)

Dynamic Critical Behavior of the Parallel Tempering Algorithm

Mehmet Dilaver,* Tarık Çelik, Meral Aydın, and Yiğit Gündüç (Hacettepe University)

Tricritical Point in the Kinetic Ising Model

Şeyda Pembegül,* Ahmet Mecit Öztaş, Yiğit Gündüç, and Meral Aydın (Hacettepe University)

- Nucleation vs. Spinodal Decomposition in a First-Order Phase Transition
Handan Arkin,* Meral Aydın, Yiğit Gündüç, and Tarık Çelik (Hacettepe University)
- Effects of Bond Randomness in 2D 8-State Potts Model on Finite Lattices
Fatih Yaşar,* Yiğit Gündüç, and Tarık Çelik (Hacettepe University)
- Aperiodicity in the q -State Potts Model
Fatih Yaşar,* Yiğit Gündüç, and Tarık Çelik (Hacettepe University)
- Ordered and Disordered Phases of the Fermionized Two-Dimensional Spin $1/2$ Heisenberg Antiferromagnet
Siyavush Azakov (Azerbaijan Academy of Sciences and Hacettepe University), Mehmet Dilaver, and Ahmer Mecit Öztaş* (Hacettepe University)
- The Effect of Quantum Fluctuations on Classical Ground States
Hüseyin Gencer* and Ali Bayrı (Inönü University)
- Continuous Degeneracy: Frustrated Square Lattice of FCC
Funda Atalay,* Ali Bayrı (Inönü University), and Servet Ekmekçi (Trakya University)
- Vortex Motion in Layered Superconductors
Atilla Kılıç* and Kıvılcım Kılıç (Abant İzzet Baysal University)
- Sticking Probability of D_2 Molecule on Rigid Ni(110) Surface
Mustafa Büyükkata* (Celal Bayar University) and Ziya B. Güvenç (Çankaya University)
- The Valency-Point-Interaction-Formula, or Structural-Electronic-Formula Method
Osman Azmi Barut (Yıldız Technical University)
- Structural Transformations at the Surface of Icosahedral $Al_{70}Pd_{20}Mn_{10}$
B. Bollinger, Mehmet Erbudak* (E.T.H. Zürich), A. Refik Kortan (Bell Labs.-Lucent), and M. Zurkirch (E.T.H. Zürich)
- Unusual Structure, Phase Transition, and Dynamics of Solid Cubane
Taner Yıldırım* (Maryland University and N.I.S.T.), P.M. Gehring, D.A. Neumann (N.I.S.T.), and T. Emrick (Chicago University)
- Single-Ion Anisotropy, Crystal Field Effects, Spin Reorientation Transitions, and Spin Waves in R_2CuO_4
Taner Yıldırım (Maryland University and N.I.S.T.)
- The Effect of Composition and Disk Speed on the Microhardness of the Rapidly Solidified Al-Mg Alloys
Tuncay Karaaslan,* Mustafa Keskin (Erciyes University), and Orhan Uzun (Gaziosmanpaşa University)
- Influences of Heat Treatment on Structure and Properties of Hypereutectic Al-Si Alloy
Orhan Uzun* (Gaziosmanpaşa University), Tuncay Karaaslan, and Mustafa Keskin (Erciyes University)

Dynamics of the One-Dimensional Blume-Emery-Griffiths Model

Mustafa Keskin and Abdülkadir Solak* (Erciyes University)

Phase Diagram of the Blume-Emery-Griffiths Model on the Simple Cubic Lattice Calculated by the Linear Chain Approximation

Erhan Albayrak* and Mustafa Keskin (Erciyes University)

Premartensitic Transitions in Shape Memory Alloys

Yıldırım Aydoğdu, Ayşe Aydoğdu, and Osman Adıgüzel* (Fırat University)

Transformation Thermodynamics in Copper-Based Shape Memory Alloys

Soner Özgen, Nejdet Kayalı, and Osman Adıgüzel* (Fırat University)

The Einstein Relation for Bose and Fermi Particles

Emel Gülmez,* Servet Ekmekçi (Trakya University), and Ali Bayrı (Inönü University)

A Study of Bistability in Resonant Tunneling Structures

Ersin Keçecioğlu* and Cemal Yalabık (Bilkent University)

Disorder and Localization in the Lowest Landau Level

Zafer Gedik* and Mehmet Bayındır (Bilkent University)

Disorder and Order Parameter Symmetry in High T_c Cuprates

Mehmet Bayındır* and Zafer Gedik (Bilkent University)

Band-Gap Renormalization in Quantum Wire Structures

Kaan Güven* and Bilal Tanatar (Bilkent University)

Microcavity Alteration of Luminescence in Semiconductors

Ali Serpengüzel and Erol Sağol* (Bilkent University)

Photonic Crystal Based Tunable Resonant Detectors

Burak Temelkuran,* Ekmel Özbay (Bilkent University), J. P. Kavanaugh, G. Tuttle, and K. M. Ho (Iowa State University)

Critical Behavior of the Specific Heat for NH_4Br

Hamit Yurtseven and Aşkın Yanık* (I.T.U.)

Renormalization-Group Theory of the Hubbard Model of Electronic Conduction in $d=3$

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

Strongly Asymmetric Tricriticality Induced by Quenched Random Fields in $d=3$

Alkan Kabakçioğlu* and Nihat Berker (M.I.T.)

Exploring a Tricritical Wing by and “External” Coupling to the Superfluid Order Parameter in ^3He - ^4He Mixtures

Anna Lopatnikova and Nihat Berker* (M.I.T.)

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