

Program of the Third Statistical Physics Days

Istanbul Technical University

18–19 July 1996

Those wishing to obtain the complete mailing address or e-mail address of any of the speakers may do so by sending a message to ituifg@vm.cc.itu.edu.tr or writing to A. Erzan, Department of Physics, Faculty of Sciences and Letters, Istanbul Technical University, Maslak 80626, Istanbul, Turkey.

Invited Talks

Granular dynamics: Models of motion in sand

Leo P. Kadanoff, University of Chicago

Statistical mechanics of rubber elasticity

Burak Erman, Bosphorus University

Quantum chaos: A route through mixed mode dynamics

Ersin Yurtsever, Koç University

Algebraic approach to the calculation of Lyapunov exponents

Avadis Hacınliyan, Bosphorus University

A new approach to solving the third form of the transport equation in plane geometry: Half-space albedo problem

Cevdet Tezcan, Ankara University

Strong violation of universality under quenched randomness and helium mixtures in aerogel

Nihat Berker, MIT

Cluster study of phase transitions

Meral Aydın, Hacettepe University

Effects of conformational disorder on the conjugation length and optical properties of conjugated polymers

Sophia Yaliraki, MIT

Critical lines and phase equilibria in polymer mixture solutions

Mustafa Keskin, Erciyeş University

Antiferromagnetic ground states

All Bayrı, İnönü University

Experimental confirmation of scaling and universality at a second order phase transition

C. H. Back, C. Wursch, U. Ramsperger A. Vaterlaus, U. Maier, D. Pescia, Laboratory for Solid State Physics, ETHZ

Defects and energetics of large Si quantum dots: A real space approach

Serdar Öğüt, University of Minnesota

Short Communications

Asymptotic solution of cloud formation in expansion chambers

C. F. Delale, TÜBİTAK MRC, M. J. E. H. Muijtens, M. E. H. van Dongen, Eindhoven University of Technology

Stable, metastable and unstable solutions of modified Pople–Karasz model

Ş. Özgan, M. Yazıcı, Kahramanmaraş Sütçü İmam University

The slab albedo problem using singular eigenfunctions and the third form of the transport equation

A. Kaşkaş, C. Tezcan, Ankara University

Choice of time step in the simulation of continuous time dynamical systems

I. Birol, A. Hacınilıyan, Bosphorus University

Path integral quantization of the theory of scalar charged particles interacting via Chern–Simons fields

M. Boz, V. Y. Fainberg, N. K. Pak, Hacettepe University

Synthesis of wavelet theory and the multigrid approach: Numerical solution of problems involving long-range interactions

D. Yeşilleyen, T. Arias, MIT

Scaling in time series from coupled map lattices

Sevgi Çıkcı, Ayşe Erzan, Istanbul Technical University

Study of clusters in two dimensional 7-state Potts-model

B. Ortakaya, Y. Gündüç, M. Aydın, T. Çelik, Hacettepe University

Dynamics of clusters in three dimensional 3-state Potts-model

F. Yaşar, Y. Gündüç, M. Aydın, T. Çelik, Hacettepe University

Tendency to the Wigner crystallization in the weakly interacting 2D electron gas

T. Kaya, University of Kocaeli, E. Nakhmedov, B. Karaoğlu, Istanbul Technical University

Formation of the triangular electron cluster in the fractional quantum Hall regime

E. P. Nakhmedov, Istanbul Technical University

Dynamic behavior of a spin-1 Ising model: Relaxation of order parameter and the "flatness" property of metastable states

M. Keskin, Erciyes University, R. Erdem, Gaziosmanpaşa University

The application of mean-field renormalization group for $A + B \rightarrow AB$ reaction model

H. Kaya, TÜBİTAK MRC, A. Erzan, TÜBİTAK MRC, Istanbul Technical University

Frustration and its importance in magnetic phase transition

F. E. Atalay, A. Bayrı, İnönü University

D.M. interactions and its ground state in the square lattice

A. Bayrı, H. Gencer, İnönü University, S. Ekmekçi, Kocaeli University

The antiferromagnetic structure of CuO_2 planes in high T_c superconductors

A. Bayrı, İnönü University, S. Ekmekçi, Kocaeli University, İ. Yeter, B. Aydın, İnönü University

The role of the structure factor in analysing the anti-ferromagnetic spin orderings

A. Bayrı, İnönü University, S. Ekmekçi Kocaeli University, T. İzgi, İnönü University

Magnetically dilute systems

M. Karabekiroğulları, Pamukkale University, S. Ekmekçi, Kocaeli University

Structure diffusion model calculation of the structure factor and pair distribution function of amorphous carbon

Seyfettin Dalgıç, Trakya University

Real time monitoring of dissolution of thin poly(methyl methacrylate) films using fluorescence technique

Ş. Uğur, Ö. Pekcan, Istanbul Technical University

Fluorescence method to study swelling phenomenon in poly(methyl methacrylate) gels

Y. Yılmaz, Ö. Pekcan, Istanbul Technical University

A microscopical model for diffusion of a polymer chain in the entangled regime

M. Canpolat, A. Erzan, Ö. Pekcan, Istanbul Technical University

Simulation of non-equilibrium diffusion on cellular automaton in three dimensional space

M. Eken, Ş. Turhan, TAEM, N. Aktekin, Gazi University

Dynamical critical exponents of the four dimensional Ising model

N. Aktekin, Gazi University

Flux line dynamics in $\text{YBa}_2\text{Cu}_4\text{O}_8$ From ^{89}Y NMR

F. Tabak, Hacettepe University, M. Corti, A. Rigamonti, Pavia University

- Two-dimensional magnetopolarons with squeezed Landau states
B. S. Kandemir, T. Altanhan, Ankara University
- Sutton–Chen potentials in molecular dynamics simulations of metal alloys
G. Dereli, T. Çağın, M. Uludoğan, M. Tomak, METU
- The temperature dependence of magnetisation and anisotropy of ultrathin ferromagnetic films
B. Kaplan, Erciyes University
- Order–disorder transitions in growing films on single crystal surfaces
M. Erbudak, M. Hochstrasser, M. Zurkich, Laboratorium für Festkörperphysik, ETHZ
- Electrical resistivity noise in the Ni₇₆Mn₂₄ amorphous film
Y. Öner, Istanbul Technical University
- Bulk modulus calculations for liquid binary alloys
M. Yılmaz, S. Karagözlü, Yıldız Technical University, S. Dalgıç, Trakya University
- Generalized distribution functions and an alternative generalization of the Planck radiation law
U. Tırnaklı, F. Büyükkılıç, D. Demirhan, Ege University
- Finite q -differences and the renormalization group
Ayşe Erzan, Istanbul Technical University
- Modelling of ferroelectric and improper ferroelectric phase transition
M. M. Tokluoğlu, H. Yurtseven, Istanbul Technical University
- A phase diagram of sodium nitrate in an electric field
A. Konu, S. Salihoğlu, H. Yurtseven, Istanbul Technical University
- Phase diagrams of smectic A–smectic C^* transition in magnetic and electric fields
S. Bellici, H. Yurtseven, S. Salihoğlu, Istanbul Technical University
- A statistical thermodynamic model for studying energy band structure of semiconductor heterostructures
H. Ünlü, Istanbul Technical University