

## PROGRAM

### PERŞEMBE 30 HAZİRAN 2011

- 08:50-09:00** Karşılama
- 09:00-09.25** Refik Kortan (A.B.D. Enerji Bakanlığı)  
*“Growing Role of Science in the Era of Global Climate Change and Energy Crisis”*
- 09:25-09:50** Burçin Ünlü (Boğaziçi Üniversitesi)  
*“Multiscale Imaging and Modeling of Cancer”*
- 09:50-10:15** Cemsinan Deliduman (Mimar Sinan Üniversitesi)  
*“Entanglement Swapping Model of DNA Replication”*
- 10:15-10:35 Ara
- 10:35-11:00** Alphan Sennaroğlu (Koç Üniversitesi)  
*“Cr<sup>2+</sup>:ZnSe Laser Media: From Material Synthesis to Solitary Pulse Generation”*
- 11:00-11:25** Tuğrul Senger (İzmir Yüksek Teknoloji Enstitüsü)  
*“Magnetic Effects in Nano-sized Graphene Structures”*
- 11:25-11:50** Aziz Kolkıran (Gediz Üniversitesi)  
*“Quantum Metrology with High-Noon States”*
- 11:50-13:00 Öğle Yemeği
- 13:00-14:40** KISA KONUŞMALAR (A1-A10)
- 14:40-15:00 Ara
- 15:00-16:50** KISA KONUŞMALAR (B1-B11)
- 16:50-17:10 Ara
- 17:10-17:35** Atilla Yılmaz (Kaliforniya Üniversitesi, Berkeley )  
*“Quenched Free Energy and Large Deviations for Random Walks in Random Potentials”*
- 17:35-18:35** H. Eugene Stanley (Boston Üniversitesi)  
*“Economic Fluctuations and Statistical Physics: Quantifying Extremely Rare Events with Applications to the Present Worldwide Crisis”*

**CUMA 1 TEMMUZ 2011**

- 09:00-09:25** Erdal Toprak (Harvard Medical School)  
*“Strong Antibiotic Resistance Evolving through an Ordered Sequence of Stepwise Genetic Changes”*
- 09:25-09:50** Nejat Bulut (İzmir Yüksek Teknoloji Enstitüsü)  
*“Comparison of the Pairing and the Density Fluctuations in the Hubbard Ladder”*
- 09:50-10:15** Gözde İnce (Sabancı Üniversitesi)  
*“Stimuli Responsive Polymeric Nanotubes”*
- 10:15-10:40** A. Levent Demirel (Koç Üniversitesi)  
*“Self-Assembly of Macromolecules into Nanostructures in Solution”*
- 10:40-11:00 Ara
- 11:00-13:00** KISA KONUŞMALAR (C1-C12)
- 13:00-14:00 Öğle Yemeği
- 14:00-15:00** H. Eugene Stanley (Boston Üniversitesi)  
*“Liquid Water, the “Most Complex” Liquid: New Results in Nanoconfined and Biological Environments”*
- 15:00-15:20 Ara
- 15:20-15:55** Deniz Kaya (Carnegie Mellon Üniversitesi)  
*“Normal Modes and Density of States of Disordered Colloidal Solids”*
- 15:55-16:20** Ali Rana Atılgan (Sabancı Üniversitesi)  
*“Mechanics of Allosteric Motions in Proteins”*
- 16:20-16:45** Ozan Sarıyer (Koç Üniversitesi)  
*“Spinless Falicov-Kimball Model in  $d = 3$ : Global Phase Diagram by Renormalization-Group Theory”*
- 16:45-17:00 Ara
- 17:00-18:50** KISA KONUŞMALAR (D1-D11)

**CUMARTESİ 2 TEMMUZ 2011**

**İstatistiksel Fizikte Temel Problemler Oturumu: Grafen/ Graphene**

**9:00-10:30** İsmet İnönü Kaya (Sabancı Üniversitesi)  
*“Graphene – Sheer Magic!”*

10:30-10:45 Ara

**10:45-12:15** İnanç Adagideli (Sabancı Üniversitesi)  
*“Dirac Equation in Condensed Matter Physics: From Graphene to Topological Insulators”*

**Kısa Konuşmalar Oturumları – Yazarlar (Konuşmacı) ve Başlıklar**

**A OTURUMU – Perşembe 30 Haziran 2011 – 13:00-14:40**

- A1 – **Gülay Dereli (Yıldız Teknik Üniversitesi), Önder Eyecioğlu**  
*“Torsion Applied Carbon Nanotubes”*
- A2 – **Necati Vardar (Yıldız Teknik Üniversitesi), Gülay Dereli**  
*“Strain Applied Carbon Nanotubes at Elevated Temperatures”*
- A3 – **Mine Konuk (İstanbul Teknik Üniversitesi), Sondan Durukanoğlu**  
*“A Theoretical Investigation: Formation of a Nanotube from a Square Ag Nanowire”*
- A4 – **Elif Özden Yenigün (Sabancı Üniversitesi)**  
*“Designed-in Molecular Interactions Lead to Superior Thermo-mechanical Properties in Nanocomposite”*
- A5 – **Mustafa Büyükata (Bozok Üniversitesi), Ziya B. Güvenç**  
*“Density Functional Study of Hydrogenated Metal Doped Cage 12-atom Boron Clusters: Analysis of  $MB_{12}H_n$  Complexes for  $n \leq 13$  and  $M = Ti, Fe, Co$ ”*
- A6 – **Numan Şarlı (Erciyes Üniversitesi), Bayram Deviren, Mustafa Keskin**  
*“Hysteresis Behavior in a Cylindrical Ising Nanowire”*
- A7 – **Sunita Negi (Institute for Plasma Research, India)**  
*“Determination of Useful Parameter Space for a Double-Walled Carbon Nanotube Based Motor Subjected to a Sinusoidally Varying Electric Field”*
- A8 – **Yusuf Kocakaplan (Erciyes Üniversitesi), Bayram Deviren, Mustafa Keskin**  
*“Hierarchical Structures of Exchange Rates Based on Turkey's Export and Import”*
- A9 – **Emrah Şimşek (İstanbul Teknik Üniversitesi), Sondan Durukanoğlu**  
*“T-Cell Differentiation in the Thymus”*
- A10 – **Ersin Kantar (Erciyes Üniversitesi), Bayram Deviren, Mustafa Keskin**  
*“Hierarchical Structure of the Turkey's Foreign Trade”*

**B OTURUMU – Perşembe 30 Haziran 2011 – 15:00-16:50**

B1 – Yusuf Yüksel (Dokuz Eylül Üniversitesi)

*“Effects of the Bond Dilution on the Phase Diagrams of a Spin-1 Transverse Ising Model with Crystal Field Interaction on a Honeycomb Lattice”*

B2 – Erol Vatansver (Dokuz Eylül Üniversitesi), Gül Gülpınar

*“Critical Behaviour of Magnetic Relaxation in a Metamagnetic Ising Model ”*

B3 – Mehmet Ağartıoğlu (Dokuz Eylül Üniversitesi), Gül Gülpınar

*“Critical Behavior of Sound Attenuation in a Mixed Ising Magnet on a Simple Cubic Lattice”*

B4 – Ümit Akıncı (Dokuz Eylül Üniversitesi)

*“The Effect of Random Magnetic Fields with One- and Two-Centered Gaussian Distributions on the Phase Diagrams of the Spin ½ and Spin-1 Ising Model”*

B5 – Yenal Karaaslan (Dokuz Eylül Üniversitesi), Gül Gülpınar

*“Critical Relaxation of the Ising Ferrimagnetic Model”*

B6 – Gül Gülpınar (Dokuz Eylül Üniversitesi), Mehmet Ağartıoğlu, Erol Vatansver

*“Relaxation Theory of a Mixed Spin-1 and Spin-2 Ising System with Different Anisotropies”*

B7 – Özlem Tuna (Dokuz Eylül Üniversitesi), Gül Gülpınar, Erol Vatansver

*“The Effect of Randomness in the Crystal Field on the Kinetics of Spin-1 Blume-Capel in the Dynamical d-T Phase Plane”*

B8 – Fatma Meydaneri (Karabük Üniversitesi), Mehmet Özdemir, Buket Saatçi, Mehmet Gündüz

*“Microstructures, Microhardness, Thermal and Electrical Properties for Pure Sn, Pure Zn and Sn-Zn Lead-Free Solder Alloys”*

B9 – Ercan Karaköse (Çankırı Karatekin Üniversitesi), Mustafa Keskin

*“Microstructure and Microhardness of Al-3Cu Rapidly Solidified Alloy”*

B10 – Berk Onat (İstanbul Teknik Üniversitesi), Sondan Durukanoğlu

*“Interaction Potentials for Al-Ni-Co Ternary Alloys and their Applications”*

B11 – İbrahim İnanç (Sabancı Üniversitesi), Ali Rana Atılğan, Canan Atılğan

*“Linear Viscoelastic Properties of Polybutadiene Melts Probed by Nanoclusters: MD Simulations and Experiments”*

**C OTURUMU – Cuma 1 Temmuz 2011 – 11:00-13:00**

- C1 – **Erhan Albayrak (Erciyes Üniversitesi)**  
*“The Mixed-Spin Ternary-Alloy in the Form of ABpCl-p on the Bethe Lattice”*
- C2 – **Evren Karakaya (Koç Üniversitesi)**  
*“Coherence Lifetimes in the Charge Conserving Systems Due to the Thin Spectrum”*
- C3 – **Gökтуğ Karpaz (Sabancı Üniversitesi), Zafer Gedik**  
*“Optimal Stochastic Local Transformations of Flip and Exchange Symmetric Quantum States”*
- C4 – **Levent Subaşı (İstanbul Teknik Üniversitesi), Menderes Işkın**  
*“Cooper Pairing and BCS-BEC Evolution in Mixed-Dimensional Fermi Gases”*
- C5 – **İbrahim Karabulut (Selçuk Üniversitesi)**  
*“Effect of Electron-Electron Interaction on Optical Processes in a Quantum Well under the Electric and Magnetic Fields”*
- C6 – **Bariş Pekerten (Sabancı Üniversitesi), Michael Wimmer, Juergen Wurm, İnanç Adagideli**  
*“Quantum Transport in Topological Insulator Nanostructures”*
- C7 – **Aykut Teker (Sabancı Üniversitesi), M. Wimmer, I. Adagideli**  
*“Classification of Topological Insulator States via Supersymmetry”*
- C8 – **Murat Taş (Sabancı Üniversitesi)**  
*“Plasmonic Contribution to the Van der Waals energy in Strongly Interacting Bilayers”*
- C9 – **Erol Kurt (Gazi Üniversitesi)**  
*“Instabilities and Patterns from Magnetic Ekman-Couette Layer”*
- C10 – **Haluk Özbek (İstanbul Teknik Üniversitesi), Mehmetcan Çetinkaya, Selen Erkan, Sevtap Yıldız**  
*“Investigations of Phase Transitions in Liquid Crystalline Materials by PhotoPryroelectric and Optical Methods”*
- C11 – **Elife Öznur Karabulut (Selçuk Üniversitesi), Mustafa Koyuncu**  
*“Two-Fluid Description of Bose-Einstein Condensed Gas at Finite Temperature”*
- C12 – **Zafer Gedik (Sabancı Üniversitesi)**  
*“Stability of Rarefied trans-Anethol/Ethanol/Water Systems”*

**D OTURUMU – Cuma 1 Temmuz 2011 – 17:00-18:50**

- D1– **Nazife Özdeş Koca (Sultan Qaboos University)**  
*“Constructions of the Chiral Polyhedra With Coxeter Diagrams and Quaternions”*
- D2 – **Mehmet Koca (Sultan Qaboos University)**  
*“Constructions of the Polyhedra and 4D Polytopes with Coxeter Groups and Quaternions”*
- D3 – **Emine Aslan (Ahi Evran Üniversitesi), Niyazi Bulut**  
*“Converged Reaction Probabilities for the  $F+DCI \rightarrow Cl+DF$  Reaction on the Ground  $12A'$  Potential Energy Surface”*
- D4 – **Menderes Işkın (Koç Üniversitesi)**  
*“Supersolid Phase for Dipolar Bose Gases on Optical Lattices”*
- D5 – **Osman Canko (Erciyes Üniversitesi)**  
*“New Formulation of the Bethe Lattice”*
- D6 – **Kamil Argın (Erciyes Üniversitesi), Osman Canko**  
*“Blume-Capel Model on the Antiferromagnetic fcc Lattice”*
- D7 – **Ali Yiğit (Karatekin Üniversitesi), Erhan Albayrak**  
*“A Bethe Lattice Study of the Mixed Spin-2 and Spin-5/2 Ising Model”*
- D8 – **Tunç Cengiz (Erciyes Üniversitesi), Erhan Albayrak**  
*“The Sound Attenuation for the Spin-1 Ising Model on the Bethe Lattice”*
- D9 – **Seçil Niksarhoğlu (Fırat Üniversitesi), Fatih Külahcı**  
*“Prediction of Radionuclide Amount in a Region with Cumulative Semivariogram (CVS)”*
- D10 – **Göker Arpağ (İstanbul Teknik Üniversitesi), Ayşe Erzan, Pradeep Kumar Mohanty**  
*“A Stochastic Model for Micro RNA - Messenger RNA Network”*
- D11– **Efe İlker, A. Nihat Berker (Sabancı Üniversitesi)**  
*“XY Spin-Glass Order in Three Dimensions”*