

**28 HAZİRAN 2012 PERŞEMBE**

**08.50-09.00 Karşılama**

**09.00-10.00** Christopher Jarzynski (Maryland Üniversitesi)  
*“Irreversibility and the Second Law of Thermodynamics at the Nanoscale”*

**10.00-10.25** Tahir Çağın (Texas A&M Üniversitesi)  
*“Nanosize Matters: Is it Necessary to Revisit the Statistical Mechanical Descriptions of Transport Phenomena?”*

**10.25-10.45 Ara**

**10.45-11.10** Hüseyin Murat Tütüncü (Sakarya Üniversitesi)  
*“Is  $Cr_3RhN$  a Superconductor?”*

**11.10-11.35** Ekrem Yanmaz (Karadeniz Teknik Üniversitesi)  
*“Observation of Flux Jumping Effect at 5K in Nano-Structured  $MgB_2$  Superconductor Prepared by Mechanical Alloying Technique”*

**11.35-12.00** Necmettin Maraşlı (Erciyes Üniversitesi)  
*“Dependency of Structure, Microhardness and Electrical Resistivity on the High Growth Rates for the Directional Solidified Zinc-Aluminum Eutectic Alloy”*

**12.00-12.35 KISA KONUŞMALAR (A1-A4)**

**12.35-14.00 Öğle Yemeği**

**14.00-14.25** Hatice Duran (TOBB Ekonomi ve Teknoloji Üniversitesi)  
*“The Effect of Solid Substrates on the Structure and Dynamics of Polymer Melts”*

**14.25-14.50** Oğuzhan Gürlü (İstanbul Teknik Üniversitesi)  
*“Two Melting Temperatures for One Surface”*

**14.50-16.00 KISA KONUŞMALAR (B1-B8)**

**16.00 – 16.20 Ara**

**16.20-18.00 KISA KONUŞMALAR (C1-C12)**

**19.00 --- Rektörevi'nde Akşam Yemeği**

**29 HAZİRAN 2012 CUMA**

**09.00-10.00** Christopher Jarzynski (Maryland Üniversitesi)

*“Work and Information Processing in a Solvable Model of Maxwell's Demon”*

**10.00-10.25** Burak Eral (Twente Üniversitesi)

*“Wetting Phenomena in Soft Matter: From a Fundamental Wetting Question Towards Advanced Fibrous Materials”*

**10.25-10.45** Ara

**10.45-11.10** Taylan Cemgil (Boğaziçi Üniversitesi)

*“Probabilistic Latent Tensor Factorisation”*

**11.10-11.35** Seda Keskin Avcı (Koç Üniversitesi)

*“Computational Screening of Metal Organic Frameworks Materials for Gas Storage and Gas Separation Applications”*

**11.35-12.00** Balasz Hetényi (Bilkent Üniversitesi)

*“Theory of Conductivity and Polarization: The Role of the Total Momentum Shift Operator”*

**12.00-12.35** KISA KONUŞMALAR (D1-D4)

**12.35-14.00** Öğle Yemeği

**14.00-14.25** Müjdat Çetin (Sabancı Üniversitesi)

*“Statistically-Based Methods for Information Extraction from Uncertain Sensor Data”*

**14.25-14.50** Kemal Türker (Koç Üniversitesi)

*“Development of New Methods to Estimate Networks in the Human Nervous System”*

**14.50-16.00** KISA KONUŞMALAR (E1-E8)

**16.00 – 16.20** Ara

**16.20-18.00** KISA KONUŞMALAR (F1-F12)

**30 HAZİRAN 2012 CUMARTESİ**

**9.00-10.30** Can Fuat Delale (Işık Üniversitesi)  
*“İstatistiksel Fizikte Temel Problemler: Enerji”*

**10.30-11.00** Ara

**11.00-12.30** Muhittin Mungan (Boğaziçi Üniversitesi)  
*“İstatistiksel Fizikte Temel Problemler: İklim”*

**Kısa Konuşmalar – Konuşmacı (Kurumu) ve Başlık**

**A OTURUMU –28 Haziran 2012 Perşembe – 12.00-12.35**

A1 – **Yusuf Yüksel (Dokuz Eylül Üniversitesi)** - “*Dynamic Phase Transition Properties and Hysteretic Behavior of a Ferrimagnetic Core/Shell Nanoparticle in the Presence of a Time Dependent Perturbation*”

A2 – **Banu Süngü Mısırhoğlu (Yıldız Teknik Üniversitesi)**, Gülay Dereli, Önder Eyecioğlu, Necati Vardar - “*Breaking Strains of Defect-Free Carbon Nanotubes: Tight Binding MD Simulation Study*”

A3 – **Ercan Karaköse (Çankırı Karatekin Üniversitesi)**, Mustafa Keskin - “*Microstructural Evolutions and Hardness during Heat Treatment of  $Al_{64}Cu_{20}Fe_{12}Si_4$  Quasicrystal Alloy*”

A4 – **Berk Onat (İstanbul Teknik Üniversitesi)**, Sondan Durukanoğlu - “*Embedded Atom Method Potential for Ni-Cu Alloys and Its Applications for Ni, Cu Growth on Cu(111)*”

**B OTURUMU –28 Haziran 2012 Perşembe – 14.50-16.00**

B1 – **Esra Şimşek (Fırat Üniversitesi)**, Seda Hekim, Sinan Akpınar - “*Reactive Scattering of Electronically and Vibrationally Excited ND with H*”

B2 – **Emine Aslan (Ahi Evran Üniversitesi)**, Faruk Arslan, Luis Baranes, Niyazi Bulut - “*Exact Quantum Calculations on the  $H^{++}HI$  Reaction*”

B3 – **Seda Hekim (Fırat Üniversitesi)**, Sinan Akpınar - “*Coriolis Coupling Calculations of the Reactive Scattering of the  $H+ND$  Reaction*”

B4 – **Alimet Sema Özen (Piri Reis Üniversitesi)**, Romina Ruberto, Giorgio Pastore, Zehra Akdeniz, Mario P. Tosi - “*DFT Calculations on Static and Dynamic Structure of Monomers, Dimers and Trimers of  $HgCl_2$* ”

B5 – **Mine Konuk (İstanbul Teknik Üniversitesi)**, Sondan Durukanoğlu - “*Molecular Static Calculations of Surface Diffusion on Metal Nanoclusters*”

B6 – **Mustafa Büyükkata (Bozok Üniversitesi)** “*Structural Similarity Analysis of Silver Clusters Obtained by Molecular Dynamics*”

B7 – **Hatice Hilal Kurt (Gazi Üniversitesi)** “*Study of the Hysteresis Behavior in IR Image Converter Cell with GaP Photodetector*”

B8 – **Faruk Arslan (Fırat Üniversitesi)**, Emine ASLAN, Jacek KLOS, Niyazi BULUT - “*Nonreactive Scattering of the  $O + H_2$ : A Time Dependent Wave Packet Approach*”

**C OTURUMU – 28 Haziran 2012 Perşembe – 16.20-18.00**

**C1 – Merve Günnar (Dokuz Eylül Üniversitesi), Hamza Polat - “Critical Behavior and Phase Diagrams of a Spin-1 Blume-Capel Model with Random Crystal Field Interactions: An Effective Field Theory Analysis”**

**C2 – Orkun Özen (Dokuz Eylül Üniversitesi), Gül Gülpınar, Mehmet Ağartıoğlu - “Investigation of the Effect of Crystal Field Disorder on the Critical Relaxation Theory of Blume Capel model”**

**C3 – Ümit Akıncı (Dokuz Eylül Üniversitesi) - “Effective Field Investigation of Dynamic Phase Transitions for Site-Diluted Ising Ferromagnets Driven by a Periodically Oscillating Magnetic Field”**

**C4 – Nejat Bulut (Izmir Institute of Technology) - “Combined Density Functional Theory and Quantum Monte Carlo Approach to Dilute Magnetic Semiconductors and Metalloproteins”**

**C5 – Menderes Işkın (Koç Üniversitesi) - “Vortex Line in Spin-Orbit Coupled Atomic Fermi gases”**

**C6 – Erol Vatanserver (Dokuz Eylül Üniversitesi), Hamza Polat - “Effects of the Bond Dilution on the Dynamic Phase Diagrams of Kinetic Ising Model”**

**C7 – Yusuf Kocakaplan (Erciyes Üniversitesi), Bayram Deviren, Mustafa Keskin - “Analysis of bubbles and crashes in the Turkish Lira Based on the USD and EUR within the Scope of Econophysics”**

**C8 – Şerafettin Doğan (Erciyes Üniversitesi), Yusuf Kocakaplan, Bayram Deviren, Mustafa Keskin - “Correlations, Hierarchies and Networks of the World's Automotive Companies”**

**C9 – Ash Tuncer (İstanbul Teknik Üniversitesi), Ayşe Erzan - “Critical Exponents on Scale Free Networks from Spectral Renormalization Group”**

**C10 – Ahmet Bilici (Fırat Üniversitesi), Fatih Külahcı - “A Risk Analysis Model for Fukushima Radioactive Fallout”**

**C11 – Şerif Çiçek (Fırat Üniversitesi), Fatih Külahcı - “Modeling of <sup>210</sup>Pb Transportation Characteristics in Keban Reservoir Bottom Sediments”**

**C12 – Sevim Karaman (Fırat Üniversitesi), Fatih Külahcı - “<sup>37</sup>Cs and <sup>90</sup>Sr Transportation Modeling by Point Cumulative Semivariogram at Hazar Lake Waters”**

**D OTURUMU – 29 Haziran 2012 Cuma – 12.00-12.35**

D1 – Erol Kurt (Gazi Üniversitesi), Omer O. Taskan - *“Periodic and Complex Responses from Two Basic Electrical Circuits”*

D2 – Mehmet Ağartıoğlu (Dokuz Eylül Üniversitesi), Gül Gülpınar - *“Dynamical Magnetic Response Functions of a Metamagnetic System under the Effect of Random Fields ”*

D3 – Tolga Çağlar (Sabancı Üniversitesi), A. Nihat Berker - *“Domain Boundary Depinning Transition Driven by Missing Bonds and Magnetic Impurities: Hard-Spin Mean-Field Theory Applied to  $d=3$  Dimensional Ising Magnets”*

D4 – Efe İlker (Sabancı Üniversitesi), A. Nihat Berker - *“High- $q$  Clock Model Spin-Glass Phase Diagrams from Renormalization-Group Theory”*

**E OTURUMU – 29 Haziran 2012 Cuma – 14.50-16.00**

E1 – Mücahit Yılmaz (Fırat Üniversitesi), Fatih Külahçı - *“Perturbed Bragg-Kleeman and Bethe-Bloch”*

E2 – Ali Yiğit (Çankırı Karatekin Üniversitesi), Erhan Albayrak - *“The Effective Field Treatment of Spin-3/2 Ising Model with a Special Random Crystal Field Distribution”*

E3 – Numan Şarlı (Erciyes Üniversitesi) - *“Kaneyoshi-Numan Roscase Structure” of the Specific Heat in a Ferromagnetic Cylindrical Core/Shell Spin-1 Ising Nanowire”*

E4 – Bahadır Ozan Aktaş (Dokuz Eylül Üniversitesi), Hamza Polat - *“Scaling of Hysteresis Dispersion via Site Dilution: Glauber Dynamics Approach on the Kinetic Ising Model”*

E5 – Yasin Polat (Erciyes Üniversitesi), Mustafa Keskin - *“Phase Diagrams of a Nonequilibrium Mixed Spin-3/2 and Spin-2 Ising System in an Oscillating Magnetic Field ”*

E6 – Yunus Şener (Nevşehir Üniversitesi), Bayram Deviren, Mustafa Keskin - *“Dynamic Hysteresis Behavior and Dynamic Phase Diagrams of the Cylindrical Ising Nanotube under a Time-Dependent Oscillating External Field”*

E7– Enis Doko (Koç Üniversitesi), A. Levent Subaşı, Menderes Işkın - *“Counterflow of Spontaneous Mass Currents in Trapped Spin-Orbit Coupled Fermi Gases”*

E8 – Seçil Niksarlıoğlu (Fırat Üniversitesi), Fatih Külahçı - *“Investigation of the Relationship between Radon and Earthquake with Factor Analysis”*

**F OTURUMU – 29 Haziran 2012 Cuma – 16.20-18.00**

F1 – **Miraç Kamışlıoğlu (Fırat Üniversitesi)**, Fatih Külahçı - *“Adaptive Neuro-Fuzzy Inference System (ANFIS) Modeling for Earthquake Prediction”*

F2 – **Cahit Dalgıçdır (Koç Üniversitesi)**, Mehmet Sayar - *“Self-assembly at the Interface: Conformational Transition in Peptides”*

F3 – **Murat Çavuş (Bozok Üniversitesi)**, Turgut Baştuğ - *“Application of Jarzynski Equality and Crooks Fluctuation Theorem in Simple versus Complex Systems”*

F4 – **Murat Tuğrul (IST-Austria)** - *“Thermodynamic Model for Transcription and its Evolutionary Implications”*

F5 – **Murat Öztürk (Koç Üniversitesi)**, Alkan Kabakçioğlu - *“One Coarse-Grained DNA Model for All: From Single Stand to Double Helix”*

F6 – **Ayşe Özlem Aykut (Sabancı Üniversitesi)**, Ali Rana Atılğan, Canan Atılğan - *“Subtle pH Differences Trigger Single Residue Motions for Moderating Conformations of Calmodulin”*

F7 – **Emel Durmaz (Sabancı Üniversitesi)**, Serdar Kuyucak, Uğur Osman Sezerman - *“Modifying the chain-length selectivity of Bacillus thermocatenulatus lipase through computational models of the enzyme-substrate complex”*

F8 – **Rıdvan Demiryürek (Sabancı Üniversitesi)**, Ali Tufani, Gözde Özaydın İnce - *“Initiated Chemical Vapor Deposition of Crosslinked Poly (N-Isopropylacrylamide): FT-IR and Water Contact Angle Studies”*

F9 – **Erdal Celal Oğuz (Düsseldorf Üniversitesi)** - *“Charged Colloids under Gravity”*

F10 – **Ömer Karakoç (Sabancı Üniversitesi)**, Gözde Özaydın İnce - *“Effects of Crosslinker and Oxygen Plasma Exposure Time on the Formation of Wrinkles on PDMS”*

F11 – **Gökçe Güven (Sabancı Üniversitesi)**, Ali Rana Atılğan, Canan Atılğan - *“Structural Analysis of Ferric Binding Protein Conformational Motions by Perturbation Response Scanning and Molecular Dynamics”*

F12 – **Beytullah Özgür (Koç Üniversitesi)**, Özge Engin, Mehmet Sayar - *“Fiber Formation via Multi-Domain Peptides: Effect of Aliphatic to Aromatic Residue Substitution”*