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Program and Contributed Papers

September 16–20, 2007, Vršac, Serbia

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XVII National Symposium on Condensed Matter Physics
SFKM 2007

Scientific Program

Focused sessions:

1. Nanostructures and Low-dimensional Systems
2. Superconductivity, Magnetism and Strongly Correlated Systems
3. Soft Matter
4. Semiconductors
5. Optics and Spectroscopy
6. Experimental Methods, Instruments, and Applied Condensed Matter Physics

Conference Program

Sunday, 16 September 2007:

17.30	Bus ride: Belgrade - Vršac
19.00 – 22.00	Registration and Welcome Cocktail

Monday, 17 September 2007

9.00 - 9.30	Registration
9.30 - 10.00	Opening Ceremony
10.00-10.25	R. Tenne: Inorganic Nanotubes and Fullere-ne-like Structures (IF): Progress Report
10.25-10.50	I. Bozovic: Studies of Atomically Perfect High-Tc Thin Films and Superlattices
10.50-11.15.	J. Zaanen: Fermionic Quantum Criticality
	20 min Coffee Break
11.35-12.00	Z. Tesanovic: Emergence of Cooper Pairs and the Physics of Cuprates
12.00-12.25	C. Petrovic: Search For New Quasi Low Di-mensional Superconductors and Semiconductors
12.25-12.50	S. H. Simon: Topological Quantum Compiling
12.50-13.15	A. Auerbach: Quantum Properties of Vortices of Two-Dimensional Continuum and Lattice Bosons
	Lunch
15.00-15.20	Igor Herbut: "Higgs" Phase Transitions on Graphene's Honeycomb Lattice
15.20-15.40	B. K. Nikolic: Quantum transport of massless Dirac fermions in graphene nanoribbons
15.40-16.00	M. O. Goerbig: Magnetophonon resonance in grapheme
16.00-16.20	Z. Sljivancanin: Metastable Structures and Recombination Pathways for Atomic Hydrogen on the Graphite(0001) Surface

15 min Coffee Break

16.35-16.55 L. Forró: The Evolution of the Non-Fermi Liquid Behavior in BaVS3 Under High Pressure
16.55-17.15 C. Strunk: Quantum Conductors as Josephson Junctions
17.15-17.35 V. Dobrosavljevic: Coulomb-Frustrated Phase Separation in a Magnetically-Doped 2DEG
17.35-17.55 M.V. Milovanovic: Quantum Disordering of a Quantum Hall Superfluid
17.55-18.15 D. Tanaskovic: Spin liquid behavior in electronic Griffiths phases

18.15-20.00 **Poster session: 1, 5 & 6**

Tuesday, 18 September 2007

NANOLab Workshop

9.00-9.20 F. R. Vukajlović: Atomic structure and spin magnetism of self-assembled Co nanowires on Pt (332)
9.20-9.40 P. Monceau: Charge Density Wave Gap Spectroscopy in Quasi-one-dimensional Compounds
9.40-10.00 K. Biljaković: Charge density glass - facts and fictions

15 min Coffee Break

10.15-10.35 B. Tadic: Multiscale Network Models of Nano-Materials
10.35-10.55 V. Meunier: Using large-scale computing for the simulation and prediction of novel phenomena at the nanoscale
10.55-11.15 A. Karwowski: Moment Equations for the Boltzmann Gas of Elastic Spheres: A Road from Statistical Physics to Continuum Mechanics

15 min Coffee Break

11.30-11.50 J. Maultzsch: Electron-phonon coupling in metallic carbon nanotubes observed by Raman scattering
11.50-12.10 I. Milosevic: Pentaheptite Allotropes of Carbon Nanotubes
12.10-12.30 N. Cotfas: Permutation representations with application to quasicrystals and CNTs
12.30-12.50 Z. Papadopolos: Is Al Correctly Placed in the Model of Icosahedral Al-Pd-Mn and Al-Cu-Fe?
12.50-13.10 E. Dobardzic: Phonons in low-dimensional crystals

Lunch

15.00-15.20 S. Logothetidis: Flexible Electronic Devices: Principles - Processes and Applications
15.20-15.40 N. Konjevic: Balmer Alpha Line Shape of Hydrogen Isotopes for Monitoring Discharge – Metal Surface Interaction
15.40-16.00 Lj. Zekovic: Galvanoluminescence After the Century
16.00-16.20 C. Teichert: Self-organization of Semicon-ductor Nanostructures and their Application to Fabricate Nanomagnet Arrays

15 min Coffee Break

16.35-16.55	D. Porath: Towards DNA- and Protein-Based Nanoelectronics?
16.55-17.15	I. M. Kulic: Hitchhikers Guide through the Cell
17.15-17.35	J. Kondev: DNA Looping and Regulation of Gene Expression
17.35-17.55	D. Dulić: Temperature gating of the ring-opening process in diarylethene molecular switches
17.55-18.15	S. Milosević: Determining the type of muscle motor activity by applying the wavelet theory and theory of random walks to characterize the neuronal noise
18.15-18.35	A. Damjanovic: Structural consequences of the ionization of internal groups in proteins
18.15-20.00	**Poster session: 2,3 & 4**

Wednesday, 19 September 2007

9.00-9.20	V.V. Ryazanov: Coexistence of 0- and pi-states in Josephson SFS junctions
9.20-9.40	M. Aprili: Dynamics of Ferromagnetic Josephson Junctions
9.40-10.00	M. L. Kulic: Pi-Contact Interferometry Based on Ultracold Fermionic Atomic Gases
10.00-10.20	M. Bozovic: Spin-triplet correlations in superconductor-ferromagnet multilayers
10.20-10.40	Lj. Dobrosavljevic-Grujic: Superharmonic Josephsons devices based on d-wave junctions with a ferromagnetic barrier
	20 min Coffee Break
11.00-11.20	H. Raffy: Evolution of Electronic Properties of BiSrCaCuO Thin Films Controlled by Oxygen Doping: Selected Experimental Results
11.20-11.40	D. Popovic: Glassy Effects in the Low Temperature Transport and Noise in Lightly Doped La2-xSrxCuO4
11.40-12.00	D. Pavuna: The Genuine Challenge of High-Tc Superconductivity: Physics and Nano-engineering of Heteroepitaxial Films
12.00-12.20	J. Demsar: Ultrafast Phenomena in Superconductors Studied by Real-time Probes
12.20-12.40	M. Skrinjar: Magnetic Properties of Spin-1/2 Antiferromagnet and High-Tc Parent Compound La2CuO4
	Lunch
14.00-15.00	L. Forro, D. Pavuna, M. Kulic , Z. Rado-vic: Mini-Symposium in Honor of Ivan Bozovic - "High-Temperature Superconduc-tors and Related Problems"
15.00-15.20	J. Filipovic: Scientific Diaspora and Homeland - partnership for prosperity
15.20-	Round Table
20.00	Excursion & Conference Dinner

Thursday, 20 September 2007

9.00-9.20	L. Golubovic: Far-From-Equilibrium Statis-tical Mechanics of the Epitaxial Growth on (110) Crystal Surfaces
9.20-9.40	M. Knezevic: Some New Results for Zero Temperature Random Field Ising Model
9.40-10.00	A. Baldereschi:

	15 min Coffee Break
10.15-10.35	M. Drndic: Sub-10 nm Device Fabrication in a Transmission Electron Microscope
10.35-10.55	M. Loncar: Light-Matter Interaction in Nanophotonic Devices
11.15-11.35	N. Vukmirović: Theory of Quantum Dot Intraband Optoelectronic Devices
11.35-11.55	V. I. Srdanov: Combinatorial approach to organic optoelectronic materials made by PVD
	15 min Coffee Break
12.10-12.30	G. Eres: Transient Interlayer Transport in SrTiO3 Pulsed Laser Deposition Studied by Time-Resolved Surface X-Ray Diffraction
12.30-12.50	G. Srajer: Atomic Origin of Magnetic Hardness in our Best Permanent Magnet
12.50-13.10	Z. Konstantinović: Metallic Nanoparticles Embedded in an Insulator Matrix: Growth Mechanisms, Magnetic and Transport Prop-erties
13.10-13.30	M. Šćepanović: Vibrational Spectroscopy Methods as a Powerful Tool for Nanomate-rials Characterization
13.30-13.50	N. Bibic: Interface mixing of Fe/Si bilayers by noble-gas ions: effects of the ion charge-state and low-energy Ar ion pre-morphiza-tion of Si substrates
13.50-14.10	M. J. Konstantinović: Solid state physics problems in nuclear materials
16.00	Bus ride: Vršac - Belgrade

Contents

Session 1: Nanostructures and Low-Dimensional Systems

Session 2: Superconductivity, Magnetism and Strongly Correlated Systems

Session 3: Soft Matter

Session 6: Experimental Methods, Instruments, and Applied Condensed Matter Physics

Miscellaneous