ADVANCES IN SOLID STATE PHYSICS AND NEW MATERIALS – SPRING WORKSHOP 2026

May 25 - 29, 2026, Institute of Physics Belgrade, Serbia

CONFERENCE PROGRAM

MONDAY, MAY 25

Time	Speaker	Title
9:00–9:30		**REGISTRATION**
9:30–9:50		**Opening remarks**
CHAIR	**Emil Božin**	
9:50–10:30	Vladimir Dobrosavljević	Mechanism of charge transfer and electrostatic field fluctuations in high-entropy metallic alloys
10:30–11:10	Vladan Stevanović	Effective bands and band-like electron transport in amorphous solids
11:10–11:30		**Coffee break**
CHAIR	**Vladimir Dobrosavljević**	
11:30–12:10	Rudi Hackl	Light Scattering in Novel Quantum Materials
12:10–12:30	Jovan Blagojević	Disorder and Electron–Phonon Coupling in 2H-$TaSe_{2-x}S_x$ Probed by Raman Spectroscopy
12:30–12:50	Tea Belojica	Experimental Evidence of Coherent-Like Phonon State in $InSiTe_3$
12:50–13:30	Nenad Lazarević	Phonon Response of FeSe Under Uniaxial Strain
13:30–14:30		**Lunch break**
CHAIR	**Rudi Hackl**	
14:30–15:10	Alexey Minenkov	Unraveling Material Evolution at the Nanoscale via in situ and ex situ Transmission Electron Microscopy
15:10–15:50	Bratislav Lukić	Neutron Imaging at ILL: Expanding Capabilities for Operando and Multi-Scale Materials Characterisation
15:50–16:30	Nataša Lazić	Spin Crystallographic Groups and Magnetic Arrangements in Low-Dimensional Structures
16:30–17:10	Božidar Nikolić	Electron-phonon Decoupling in Kagome Lattice

40-minute talks: 30 min presentation + 10 min Q&A / 20-minute talks: 15min presentation + 5 min Q&A

TUESDAY, MAY 26

Time	Speaker	Title
CHAIR	**Jernej Mravlje**	
9:30–10:10	Cesare Franchini	Hidden orders and polaron effects in spin-orbit entangled correlated insulators
10:10–10:50	Michele Reticcioli	Dual Role of Polarons in Functional Materials
10:50–11:10		**Coffee break**
CHAIR	**Cesare Franchini**	
11:10–11:50	George Volonakis	Ab initio Modelling and Computational Screening of Halide Perovskites to Ternary Halide Double Salts
11:50–12:30	Jernej Mravlje	Breakdown of Drude transport and origin of c-axis resistivity maximum in layered oxides
12:30–12:50	Lorenzo Ciliberti	Machine Learning the Order-Disorder Jahn-Teller Transition in $LaMnO_3$
12:50–13:30	Mario Novak	Colossal magnetoresistance in insulating $EuCd_2As_2$
13:30–14:30		**Lunch break**
CHAIR	**Mario Novak**	
14:30–15:10	Emil Božin	Hidden States and Dimensionality Reduction as Enablers of Ultralow Thermal Conductivity
15:10–15:50	Ana Milosavljević	Strain-Tunable Hysteresis of the CDW Transition in Bulk 1T-TaS_2
15:50–16:10	Ana Kanjevac	Evolution of Electron-Phonon Coupling Across a Topological Phase Transition in $ZrTe_5$

WEDNESDAY, MAY 27

Time	Speaker	Title
CHAIR	**Željko Šljivančanin**	
9:30–10:10	Masahiko Isobe	Exotic Phase Transitions in Chromates with Mixed Valence
10:10–10:50	Carl Lehman	Probing Green's Function Zeros by Co-tunneling through Mott Insulators
10:50–11:10		**Coffee break**

40-minute talks: 30 min presentation + 10 min Q&A / 20-minute talks: 15min presentation + 5 min Q&A

CHAIR	**Andrey Mishchenko**	
11:10–11:50	Oleg Yazyev	In Silico Discovery of Novel Topological Materials
11:50–12:10	Lenka Filipović	Electronic Properties of Layered Phyllosilicates: A First-Principle Analysis
12:10–12:50	Željko Šljivančanin	Stabilization of Single Atoms on 2D Materials: From Hydrogen Catalysis to Atomic-Scale Magnetism
12:50–13:50		**Lunch break**
CHAIR	**Carl Lehman**	
13:50–14:30	Stefano Ragni	Polarons with Nonlinear Electron-Phonon Coupling via Diagrammatic Monte Carlo in Displacement Space
14:30–15:10	Andrey Mishchenko	Diagrammatic Monte Carlo: exact solution of electron-phonon and Kondo-Lattice problem
15:10–15:30	Samuele De Amicis	Diagrammatic Monte Carlo for Anisotropic and Degenerate Bands

THURSDAY, MAY 28

Time	Speaker	Title
CHAIR	**Dejan Đokić**	
9:30–10:10	Armando Consiglio	Room-Temperature Excitons and Exciton Dispersion in a Two-Dimensional Quantum Spin Hall Insulator
10:10–10:50	Sonja Predin	Zitterbewegung Chirality and Its Relation to Berry Curvature
10:50-11:30	Petar Mitrić	Transport in electron-phonon systems: insights from the model systems
10:30–11:50		**Coffee break**
CHAIR	**Armando Consiglio**	
11:50–12:30	Dejan Djokić	Fano Universality Revisited: Phonon Decoupling as a Pathway to Expedient Raman Spectral Analysis
12:30–13:10	Milena Filipović	Transport Through a Junction With a Precessing Anisotropic Molecular Spin
13:10–13:50	Zorica Popović	Andreev bound state spectrum and nonreciprocal Josephson current in SFFS junctions with interfacial SOC
13:50–14:50		**Lunch break**
CHAIR	**Jelena Pešić**	
14:50–15:30	Biljana Kosanović	Open Science in Serbia: Not a Fairy Tale, but a Good Case Study

40-minute talks: 30 min presentation + 10 min Q&A / 20-minute talks: 15min presentation + 5 min Q&A

15:30–16:10	Matija Zlatar	The Serbian Reproducibility Network: Building Reliable and Open Research Practices in Serbia
16:10–16:30		**Open Science Panel Discussion**

FRIDAY, MAY 29

Time	Speaker	Title
CHAIR	**Jelena Mitrić Otašević**	
9:30–10:10	Snežana Lazić Knežević	Cost-Efficient Deterministic Engineering of Quantum Light Emitters in Two-Dimensional Semiconductors
10:10–10:50	Sanja Đurđić Mijin	Why are photonic qubits based on deterministic quantum light sources key to future quantum technologies and how can we engineer them for practical applications
10:50–11:10		**Coffee break**
CHAIR	**Sanja Đurđić Mijin**	
11:10–11:30	Borislav Petrović	Interband Cascade Lasers With Hybrid Superlattice Plasmon-Enhanced Claddings For Operation Beyond the Sweet Spot Wavelength Range
11:30–11:50	Jovana Jelić	Spectroscopic and Structural Characterization of Co(III), Cu(II), and Ni(II) Complexes with the Bioactive Hp_2DAP Ligand
11:50–12:30	Jelena Mitrić Otašević	Processing-Dependent Aging Behavior of Dental Resins: How Surface and Molecular Structure Dictate Color Stability and Translucency
12:30–12:40		**CLOSING CEREMONY**
12:40		**Lunch**