

LET'S GIVE IT A SPIN!

21-23 May 2025
Science Technology
Park Belgrade,
Serbia

Workshop on recent
progress, development,
and applications of
two-dimensional magnets
in spintronics



WORKSHOP PROGRAM

Start	End	WEDNESDAY	THURSDAY	FRIDAY
08:30	09:00	REGISTRATION		
09:00	09:30	Evgeny Tsymbal	Pietro Gambardella	Stefan Blügel
09:30	10:00	Jakub Železný	Aires Ferreira	Yuriy Mokrousov
10:00	10:30	COFFEE BREAK	COFFEE BREAK	Declan Nell Paulina Jureczko
10:30	11:00	Thomas Olsen	Saroj P. Dash	COFFEE BREAK
11:00	11:30	Paolo Barone	Riccardo Comin	Marko Orozović
11:30	11:45	Mikhail Titov	László Szunyogh	Timon Moško
11:45	12:00	Joaquín Medina Dueñas	Denis Šabani	Zoltán Tajkov
12:00	13:45	LUNCH BREAK	LUNCH BREAK	John Lawrence Euste Federico Orlando Adam Hložný Fatemeh Haddadi
13:45	14:15	Jaroslav Fabian	Jan Kuneš	WORKSHOP CLOSING
14:15	14:45	Branislav Nikolić	Marco Gibertini	
14:45	15:15	COFFEE BREAK	COFFEE BREAK	
15:15	15:45	Biplab Sanyal	José J. Baldoví	
15:45	16:00	Juraj Mních	Simran Chourasia	
16:00	16:15	Maedeh Rassekh	Yaroslav Zhumagulov	
16:15	16:30	Thomas Naimer	Božidar N. Soškić	
16:30	16:45	Dániel Tibor Pozsár	Jozef Haniš	
19:00			WORKSHOP DINNER	

* Workshop dinner and coffee breaks are included in the conference fee

** The workshop program is updated as of May 14, 2025

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WEDNESDAY

Evgeny Tsymbal - Lifting spin degeneracy of van der Waals antiferromagnets by polar stacking

Jakub Železný - Non-Relativistic Spin Currents and Torques in Antiferromagnets

Thomas Olsen - Non-collinear magnetism in 2D materials from first principles: Magnetoelectricity and type II multiferroic order

Paolo Barone - Magnetoelectricity of Topological Solitons in 2D Magnets

Mikhail Titov - Orbital magnetization from charge current parallel to an interface: a non-Hall effect mechanism

Joaquín Medina Dueñas - Boosting spin-orbit torque through intra-particle entanglement in Dirac materials

Jaroslav Fabian - Spin proximity effects in 2D van der Waals heterostructures

Branislav Nikolić - Density matrix and dissipation in spin transport and dynamics: Applications to spin-orbit torque and exciton-mediated optical excitation of magnons

Biplab Sanyal - Magnetism and spin transport in 2D magnet based van der Waals heterostructures

Juraj Mnich - The spin accumulation in graphene on 1T-TaS₂ using the linear response theory. The effect of a perpendicular electric field.

Maedeh Rassekh - Proximity-Induced Self-Torque in Graphene/1T-TaS₂

Thomas Naimier - Radial Rashba spin-orbit fields in commensurate twisted transition-metal dichalcogenide bilayers

Dániel Tibor Pozsár - Spin model of graphene triangulenes embedded in hexagonal boron nitride

THURSDAY

Pietro Gambardella - Dissipative and nondissipative dynamics excited by spin torques in a quantum dot

Aires Ferreira - Spin and Orbital Currents in Two-Dimensional Layered Materials

Saroj P. Dash - Spin and orbital induced dynamics in 2D Magnets

Riccardo Comin - Switchable p-wave magnetism

László Szunyogh - Tuning magnetic exchange interactions in two-dimensional magnets

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Denis Šabani - Beyond the orbitally-resolved magnetic exchange

Jan Kuneš - X-ray magnetic circular dichroism in MnTe and rutile altermagnets

Marco Gibertini - Electric field control of spin (and valley) polarization in two-dimensional antiferromagnets

José J. Baldoví - Controlling magnetism in 2D van der Waals materials from first principles

Simran Chourasia - Building unconventional magnetic phases on graphene by H atom manipulation: From altermagnets to Lieb ferrimagnets

Yaroslav Zhumagulov - Hund interaction induced superconductivity in proximitized Bernal bilayer graphene

Božidar N. Soškić - Borophenes: Tuning Superconducting Properties via Hydrogenation and Intercalation, and Stabilizing 2D Magnetic Nanostructures

Jozef Haniš - Effect of scalar and magnetic impurity on quasiparticle interference of monolayer NbSe₂

FRIDAY

Stefan Blügel - Towards Cryo-Spintronics

Yuriy Mokrousov - Orbitronics with magnetic 2D materials

Declan Nell - Half-Metallic Transport in the Ferromagnetic van der Waals FGT Family

Paulina Jureczko - Strain-tuning of spin anisotropy in single-layer phosphorene: insights from Elliott-Yafet and Dyakonov-Perel spin relaxation

Marko Orozović - Prospects for increasing the Curie temperature in monolayer by carrier doping

Timon Moško - Magnetic properties and electronic response of monolayer α -NbSi₂N₄

Zoltan Tajkov - Proximity-Induced Magnetic Phases in CrI₃ Monolayers Coupled to WSe₂

John Lawrence Euste - Switching of the magnetic anisotropy in hole-doped H-VTe₂ by spin-orbit splitting

Federico Orlando - AMaRaNTA: An AiiDA-based Workflow To Automate Calculations Of Exchange Parameters In 2D Magnets

Adam Hložný - ML based approach for calculating the dynamics of sulfur vacancies in monolayer MoS₂: extensive study

Fatemeh Haddadi - Exploring the magnetic landscape of easily-exfoliable two-dimensional materials