

Programme
CHIROMAG: COST ACTION CA23136
Opening Workshop



Chirality and magnetism: state of the art, challenges, techniques and applications

March 31st - April 4th, 2025, Gozd Martuljek, Slovenia

Monday, 31. 3. 2025		
	Author	Title
	Arrival	
16:30 - 18:00	Registration	
18:00 - 19:00	Andrei Kirilyuk et al.	CHIROMAG presentation
19:00 - 20:00	Dinner	

Tuesday, 1. 4. 2025		
	Author	Title
	Chair: Martina Bassini	
9:00 - 9:30	Steven Johnson	Perspectives on ultrafast x-ray probes of chirality and magnetism
9:30 - 10:00	Oleksandr Kovalenko	Ultrafast coherent phono-magnetism in iron oxides
10:00 - 10:30	Benjamin Stadtmüller	Vectorial spin filtering at chiral metal-organic hybrid interfaces
10:30 - 11:00	Coffee Break	
	Chair: Steven Johnson	
11:00 - 11:30	Timo Kuschel	Higher-order magnetooptic Kerr effect in magnetic thin films
11:30 - 12:00	Carl Davies	Phonon-driven switching of magnetization
12:00 - 14:00	Lunch Break	

	Chair: Olena Fedchenko	
14:00 - 14:30	Dominik Juraschek	Emerging phenomena from chiral phonons
14:30 - 15:00	Sebastian Maehrlein	Driving Coherent Phonon-Phonon Angular Momentum Transfer via Lattice Anharmonicity
15:00 - 15:30	Michael Fechner	Photo-induced chirality and ferroaxial switching
15:30 - 16:00	Coffee Break	
	Chair: Dominik Juraschek	
16:00 - 16:30	Mara Strungaru	Route to minimally dissipative switching via terahertz phonon pumping
16:30 - 17:00	Eric Busquet	Soft phonon mode driven chiral phase transitions in crystals and enantioselectivity
17:00 - 17:40		Techniques, Facilities
17:40 - 19:00	Posters	
19:00 - 20:00	Dinner	
20:00	Social Event	

Wednesday, 2. 4. 2025		
	Author	Title
	Chair: Mara Strungaru	
9:00 - 9:30	Paolo Vavassori	Fundamental of magneto-optics and its application to study ultrafast dynamics
9:30 - 10:00	Emmanuelle Jal	Exploring magnetism with X-rays: from spectroscopy to scattering and imaging.
10:00 - 10:30	Helmut Schultheiss	Brillouin Light Scattering
10:30 - 11:00	Coffee Break	

	Chair: Paolo Vavassori	
11:00 - 11:30	Olena Fedchenko	A microscope for the reciprocal space
11:30 - 12:00	Vladimir Srdic	Epitaxial oxide films by solution deposition techniques
12:00 - 14:00	Lunch Break	
14:00 - 15:30	Social/ out-of-program Activities / Networking	
15:30 - 17:00	MC meeting	
17:00 - 17:30	Coffee Break	
	Chair: Igor Vaskivskyi	
17:30 - 18:10		Techniques, Facilities
18:10 - 19:40	Posters	
19:40 - 20:00	Break	
20:00	Social Dinner	

Thursday, 3. 4. 2025		
	Author	Title
	Chair: Lukas Nadvornik	
9:00 - 9:30	Stanislav Kamba	THz field-induced magnetic moment in the quantum paraelectric diamagnet KTaO_3
9:30 - 10:00	Eteri Svanidze	Discovery of new materials from unexpected places
10:00 - 10:30	Sebastian Gönnerwein	Phonon Pumping Experiments
10:30 - 11:00	Coffee Break	
	Chair: Stanislav Kamba	
11:00 - 11:30	Matthias Opel	Nonreciprocal Magnon Hanle Effect in Antiferromagnetic $\alpha\text{-Fe}_2\text{O}_3$

11:30 - 12:00	Dominik Kriegner	Altermagnetism in MnTe and beyond
12:00 - 14:00	Lunch Break	
14:00 - 15:30	Social / out-of-program Activities / Networking	
	Chair: Ciubotaru Florin	
15:30 - 16:00	Andrii Chumak	Nanoscale spin-wave RF devices
16:00 - 16:30	Marcus Becherer	Patterning Magnetic Thin Films via Ion Beam Techniques
16:30 - 17:00	Martin Hempel	Modern Packaging Technologies for Research and Application of Hybrid Systems
17:00 - 17:30	Coffee Break	
	Chair: Mehmet Cengiz Onbasli	
17:30 - 18:00	Riccardo Bertacco	Hybrid MEMS-magnonic devices for RF signal processing and computing
18:00 - 18:30	Gyorgy Csaba	AI Accelerators using Magnonic Devices
18:30 - 19:00	Free discussion	
19:00 - 20:00	Dinner	

Friday, 4. 4. 2025		
	Author	Title
9:00 - 10:30	Recent results (round table)	
10:30 - 12:00	Social / out-of-program Activities / Networking	
12:00 - 13:00	Lunch Break	
13:00	Departure	

Techniques, Facilities: Tuesday, 1. 4. 2025	
Author	Title
Feilhauer Juraj	Research facilities at the Institute of Electrical Engineering in Bratislava
Moreia Joaquim	Raman Spectroscopy Laboratory - measuring under extreme conditions
Maehrlein Sebastian	High-Field THz User Facility TELBE
Capua Amir	Facilities and activities of the Hebrew University Spintronics Lab
Onbasli Mehmet Cengiz	Epitaxial growth (MBE, PLD, sputter), modeling (micromagnetic, FDTD, DFT), characterization (XRD, XPS, AFM, TEM, Raman) and patterning of 2D materials and devices
Kadlec Christelle	Time-domain THz spectroscopy in magnetic field up to 7 T
Pajić Damir	Magnetic and transport properties of novel synthesized and characterized metal-organic materials
Johnson Steven	SwissFEL: a tool for transient atomic and magnetic structure studies

Techniques, Facilities: Wednesday, 2. 4. 2025	
Author	Title
Svanidze Eteri	Synthesis and characterization of toxic and air-sensitive materials
Kamba Stanislav	Magnon and phonon spectroscopy in Prague
Kizil Ramazan	Chiral Spinterface Built-in On-Chip NanoDevices
Scherbakov Alexey	Ultrafast magnetoacoustics at TU Dortmund
Nadvornik Lukas	THz time-domain spectroscopy
Davies Carl	Two-color pump-probe schemes at FELIX
Bertacco Riccardo	Integration of lead-free piezo and thick hard/soft magnetic layers in magnonic devices
Silva Ana Sofia	Ultrafast Spectroscopy from THz to EUV at the University of Porto

Poster session: Tuesday, 1. 4. 2025 & Wednesday, 2. 4. 2025

No.	Author	Title
1	Capua Amir	Optical control of the magnetization emerging from the magnetic part of the optical field in the Landau-Lifshitz-Gilbert equation
2	Feilhauer Juraj	Unidirectional edge states in topological magnonic crystal
3	Giannouri Maria	Magnetostructural Properties in the Heusler alloy $\text{Ni}_{50}\text{Mn}_{25+x}\text{Sn}_{25-x}$; $x=13,14$.
4	Juraschek Dominik	Emerging phenomena from chiral phonons
5	Kadlec Christelle	Time-domain THz spectroscopy in magnetic field: selected results
6	Kadlec Filip	Low-temperature magnetic and multiferroic properties of BaHoFeO_4
7	Kaya Dogan	PtAu-Fe/Co Nanoparticles: Hybrid Solutions in Magnetism and Catalysis
8	Kizil Ramazan	Nanowire-Based On-Chip Chiral Spintronic Device Fabrication and Characterization
9	Moreia Joaquim	Spin structure control in a two magnetic sublattice system: the role of the 4f magnetic anisotropy
10	Onbasli Mehmet Cengiz	Emergence of a topologically protected room temperature hopfion-skyrmion configuration in a static three-dimensional topological soliton
11	Pajić Damir	Magnetic order in layered hybrid halocuprates with chiral organic cations
12	Rózsa Levente	Topological meron-antimeron domain walls and skyrmions in a low-symmetry system
13	Scherbakov Alexey	Magnon-phonon interaction for neuromorphic computing
14	Strohsack Jaka	Ultrafast magnetization dynamics of Co/CoO bilayers interfaced with organic molecules
15	Tafra Emil	Colossal magnetoresistance effect and ferromagnetism in overdoped $\text{La}_{(1-x)}\text{Ca}_x\text{MnO}_3$ ($x \geq 0.5$)
16	Toković Iva	DFT Study of Structural, Electronic and Magnetic Properties of LaMnO_3
17	Vukmirovic Jelena	Processing of complex oxide heterostructured ultrathin manganite films from solution
18	Yaniv Omer	Multicolor phonon excitation in terahertz cavities
19	Zhao Hui	Temperature dependent Raman spectra and THz emission of Co/C60 heterostructures