

Magnetism Division Fachverband Magnetismus (MA)

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Overview of Invited Talks and Sessions

(Lecture halls HSZ 02, HSZ 04, HSZ 401, HSZ 403, and POT 6; Poster P1 and P2/EG)

Invited Talks

MA 1.1	Sun	16:00–16:30	HSZ 04	Making better batteries? – From Li-ion to Na-ion batteries — •PHILIPP ADELHELM
MA 1.2	Sun	16:30–17:00	HSZ 04	Sustainable Thermoelectric Materials Predicted by Data Mining and Machine Learning — •KORNELIUS NIELSCH
MA 1.3	Sun	17:00–17:30	HSZ 04	Design strategies for electrocatalysts – an electrochemist’s perspective — •KRISTINA TSCHULIK
MA 1.4	Sun	17:30–18:00	HSZ 04	Green magnetic materials for efficient energy, transport and cooling applications — •OLIVER GUTFLEISCH
MA 2.1	Mon	9:30–10:00	HSZ 02	Two-dimensional Skyrmions in the real three-dimensional world — •NIKOLAI KISELEV
MA 8.1	Mon	15:00–15:30	HSZ 04	Optical control of antiferromagnetism — •CHRISTIAN TZSCHASCHEL
MA 14.1	Tue	9:30–10:00	HSZ 04	Antiferromagnetism-driven two-dimensional topological nodal-point superconductivity — •ROBERTO LO CONTE, MACIEJ BAZARNIK, ERIC MASCOT, KRISZTIÁN PALOTÁS, LEVENTE RÓZSA, LÁSZLÓ SZUNYOGH, ANDRÉ KUBETZKA, DIRK K. MORR, KIRSTEN VON BERGMANN, ROLAND WIESENDANGER
MA 25.1	Wed	9:30–10:00	HSZ 04	MAGNOTHERM – One way to start a deep tech spin-off from research — •MAX FRIES
MA 25.2	Wed	10:00–10:30	HSZ 04	Spin-Ion Technologies : taking the research from a lab to a start-up company — •DAFINÉ RAVELOSONA
MA 25.3	Wed	10:30–11:00	HSZ 04	MagREESource : the green Rare Earth Magnet company — •SOPHIE RIVOIRARD, ERICK PETIT
MA 25.4	Wed	11:00–11:30	HSZ 04	THATec Innovation – we automate your lab — •THOMAS SEBASTIAN
MA 25.5	Wed	11:30–12:00	HSZ 04	Kiutra: Magnetic refrigeration for science and technology — •ALEXANDER REGNAT, JAN SPALLEK, TOMEK SCHULZ, CHRISTIAN PFLEIDERER
MA 26.1	Wed	9:30–10:00	HSZ 401	The self-induced spin glass: the perplexing magnetism of elemental neodymium — •ALEXANDER KHAJETOORIANS
MA 30.1	Wed	15:00–15:30	HSZ 02	Femto- phono- magnetism — •SANGEETA SHARMA
MA 30.2	Wed	15:30–16:00	HSZ 02	Spin-switchable molecules in interaction with their environment. — •CYRILLE BARRETEAU
MA 30.3	Wed	16:15–16:45	HSZ 02	Yep, real photodoping. — LUKAS GIERSTER, •JULIA STÄHLER
MA 30.4	Wed	16:45–17:15	HSZ 02	Probing ultrafast magnetization thanks to ultrashort soft X-ray pulses — •EMMANUELLE JAL
MA 34.1	Thu	9:30–10:00	HSZ 02	Polarized phonons carry angular momentum in ultrafast demagnetization — •PETER BAUM
MA 34.2	Thu	10:00–10:30	HSZ 02	Spin-phonon coupling in ordered magnets: origin and consequences — •AKASHDEEP KAMRA
MA 34.3	Thu	10:30–11:00	HSZ 02	Magnon-mechanics in high overtone acoustic resonators — •HANS HUEBL

MA 34.4	Thu	11:15–11:45	HSZ 02	Cavity Magnomechanics: Harnessing the Magnomechanical Coupling for Applications in the Microwave and Optical Regimes — ●SILVIA VIOLA KUSMINSKIY
MA 34.5	Thu	11:45–12:15	HSZ 02	Coherent spin-wave transport in an antiferromagnet — ●ANDREA CAVIGLIA
MA 41.1	Thu	15:00–15:30	HSZ 02	Altermagnetism and spin symmetries — ●LIBOR ŠMEJKAL
MA 41.2	Thu	15:30–16:00	HSZ 02	Spontaneous Hall effect in Mn₅Si₃ altermagnet — ●H. REICHLLOVA, R. LOPES SEEGER, R. GONZÁLEZ-HERNÁNDEZ, I. KOUTA, R. SCHLITZ, D. KRIEGNER, P. RITZINGER, M. LAMMEL, M. LEIVISKA, V. PETRICEK, E. SCHMORANZEROVA, A. BADURA, A. THOMAS, V. BALTZ, L. MICHEZ, J. SINOVA, S.T.B. GOENNENWEIN, T. JUNGWIRTH, L. SMEJKAL
MA 41.5	Thu	16:30–17:00	HSZ 02	Generation of tilted spin-current by the collinear antiferromagnet RuO₂ — ●ARNAB BOSE
MA 41.6	Thu	17:00–17:30	HSZ 02	First-principles studies on the anomalous transport properties of ferromagnets, antiferromagnets, and altermagnets — ●WANXIANG FENG
MA 41.7	Thu	17:30–18:00	HSZ 02	Insight into chemical and magnetotransport properties of epitaxial α-Fe₂O₃/Pt bilayers — ●ANNA KOZIOŁ-RACHWAŁ, NATALIA KWIATEK, WITOLD SKOWROŃSKI, KRZYSZTOF GROCHOT, JAROSŁAW KANAK, EWA MADEJ, KINGA FREINDL, JÓZEF KORECKI, NIKA SPIRIDIS

Invited Talks of the joint Symposium SKM Dissertation Prize 2023 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ 04	Diffusion of antibodies in solution: from individual proteins to phase separation domains — ●ANITA GIRELLI
SYSD 1.2	Mon	10:00–10:30	HSZ 04	Intermediate Filament Mechanics Across Scales — ●ANNA V. SCHEPERS
SYSD 1.3	Mon	10:30–11:00	HSZ 04	Ultrafast Probing and Coherent Vibrational Control of a Surface Structural Phase Transition — ●JAN GERRIT HORSTMANN
SYSD 1.4	Mon	11:00–11:30	HSZ 04	Electro-active metasurfaces employing metal-to-insulator phase transitions — ●JULIAN KARST
SYSD 1.5	Mon	11:30–12:00	HSZ 04	The role of unconventional symmetries in the dynamics of many-body systems — ●PABLO SALA

Invited Talks of the joint Symposium Green Magnets for Efficient Energy Conversion (SYGM)

See SYGM for the full program of the symposium.

SYGM 1.1	Mon	15:00–15:30	HSZ 01	Data mining protocols for functional magnetic materials — ●OLLE ERIKSSON
SYGM 1.2	Mon	15:30–16:00	HSZ 01	High performance permanent magnets; elements criticality, new demands, and extrinsic magnetic properties — ●HOSSEIN SEPEHRI-AMIN, XIN TANG, TADAKATSU OHKUBO, KAZUHIRO HONO
SYGM 1.3	Mon	16:00–16:30	HSZ 01	Magnetic shape memory Heuslers: microstructure-related effects on the martensitic transformation — ●FRANCA ALBERTINI
SYGM 1.4	Mon	16:45–17:15	HSZ 01	Thin film combinatorial studies of hard magnetic materials — ●NORA DEMPSEY
SYGM 1.5	Mon	17:15–17:45	HSZ 01	Magnetocaloric materials for energy-efficient thermal control systems — ●VICTORINO FRANCO, AUN N. KHAN, JORGE REVUELTA-LOSADA, ÁLVARO DÍAZ-GARCÍA, LUIS M. MORENO-RAMÍREZ, JIA YAN LAW

Invited Talks of the joint Symposium Real-Time Measurements of Quantum Dynamics (SYQD)

See SYQD for the full program of the symposium.

SYQD 1.1	Thu	9:30–10:00	HSZ 01	Real-time measurement and control of spin dynamics in quantum dots — ●SEIGO TARUCHA
SYQD 1.2	Thu	10:00–10:30	HSZ 01	Quantum Dot arrays for Quantum Information Transfer — ●GLORIA PLATERO, DAVID FERNANDEZ-FERNANDEZ, JUAN ZURITA

SYQD 1.3	Thu	10:30–11:00	HSZ 01	Optical Detection of Real-Time Quantum Dynamics in Quantum Dots — •MARTIN GELLER, JENS KERSKI, ERIC KLEINHERBERS, JÜRGEN KÖNIG, ANNIKA KURZMANN, PIA LOCHNER, AXEL LORKE, ARNE LUDWIG, HENDRIK MANNEL, PHILIPP STEGMANN, ANDREAS WIECK, MARCEL ZÖLLNER
SYQD 1.4	Thu	11:30–12:00	HSZ 01	Cooper Pair Splitting in Real-Time — •CHRISTIAN FLINDT
SYQD 1.5	Thu	12:00–12:30	HSZ 01	Trajectory-based detection in stochastic and quantum thermodynamics — •JUKKA PEKOLA

Invited Talks of the joint Symposium Topological Superconductor-Magnet Heterostructures (SYTS)

See SYTS for the full program of the symposium.

SYTS 1.1	Thu	15:00–15:30	HSZ 01	Blending of superconductivity and magnetism via topological solitons — •CHRISTOS PANAGOPOULOS
SYTS 1.2	Thu	15:30–16:00	HSZ 01	Topological landscaping in magnet-superconductor heterostructures — •SEBASTIÁN A. DÍAZ
SYTS 1.3	Thu	16:00–16:30	HSZ 01	Experimental study of minigaps and end states in bottom-up designed multi-orbital Shiba chains — •JENS WIEBE
SYTS 1.4	Thu	16:45–17:15	HSZ 01	Quantum spins and hybridization in artificially-constructed chains of magnetic adatoms on superconducting 2H-NbSe₂ — •KATHARINA J. FRANKE
SYTS 1.5	Thu	17:15–17:45	HSZ 01	Braiding of Majorana zero modes — •STEPHAN RACHEL

Invited Talks of the joint Symposium Physics of van der Waals 2D Heterostructures (SYHS)

See SYHS for the full program of the symposium.

SYHS 1.1	Fri	9:30–10:00	HSZ 01	Novel moiré excitons and ultrafast optical dynamics in van der Waals 2D heterostructures — •STEVEN G. LOUIE
SYHS 1.2	Fri	10:00–10:30	HSZ 01	Interaction induced magnetism in 2D semiconductor moiré superlattices — •XIAODONG XU
SYHS 1.3	Fri	10:30–11:00	HSZ 01	Ions in tight places: intercalation and transport of ions in van der Waals heterostructures — •IRINA GRIGORIEVA
SYHS 1.4	Fri	11:15–11:45	HSZ 01	Spin-orbit proximity in van der Waals heterostructures — •FELIX CASANOVA
SYHS 1.5	Fri	11:45–12:15	HSZ 01	Plethora of many-body ground states in magic angle twisted bilayer graphene — •DMITRI EFETOV

Sessions

MA 1.1–1.4	Sun	16:00–18:00	HSZ 04	Tutorial: Strategic elements and sustainability (joint session MA/TUT)
MA 2.1–2.8	Mon	9:30–12:00	HSZ 02	Skyrmions I
MA 3.1–3.11	Mon	9:30–12:30	HSZ 401	Magnetic Materials for Efficient Energy Conversion
MA 4.1–4.14	Mon	9:30–13:00	HSZ 403	Spin Transport and Orbitronics, Spin-Hall Effects (joint session MA/TT)
MA 5.1–5.6	Mon	9:30–11:00	POT 6	Thin Films: Magnetic Coupling Phenomena / Exchange Bias
MA 6.1–6.6	Mon	14:30–17:05	POT 51	Focus: Dislocations in Ceramics: Mechanics, Structures and Functionality (joint session KFM/MA)
MA 7.1–7.12	Mon	15:00–18:00	HSZ 02	Computational Magnetism
MA 8.1–8.11	Mon	15:00–18:00	HSZ 04	Ultrafast Magnetization Effects I
MA 9.1–9.10	Mon	15:00–17:45	HSZ 401	Cooperative Phenomena: Spin Structures and Magnetic Phase Transitions
MA 10.1–10.8	Mon	15:00–17:15	HSZ 403	Topological Insulators (joint session MA/TT)
MA 11.1–11.6	Mon	15:00–16:45	POT 6	Non-Skyrmionic Magnetic Textures I
MA 12.1–12.8	Tue	9:30–11:30	HSZ 02	Skyrmions II

MA 13.1–13.9	Tue	9:30–13:15	HSZ 03	Focus Session: New Perspectives for Adiabatic Demagnetization Refrigeration in the Kelvin and sub-Kelvin Range (joint session TT/MA)
MA 14.1–14.7	Tue	9:30–11:45	HSZ 04	Surface Magnetism
MA 15.1–15.5	Tue	9:30–11:50	HSZ 401	INNOMAG e.V. Prizes 2023 (Diplom-/Master and Ph.D. Thesis)
MA 16.1–16.9	Tue	9:30–12:00	HSZ 403	Magnonics
MA 17.1–17.6	Tue	9:30–11:00	POT 6	Thin Films: Magnetic Anisotropy
MA 18.1–18.8	Tue	15:00–17:15	HSZ 02	Functional Antiferromagnetism I
MA 19.1–19.7	Tue	15:00–17:00	HSZ 04	Molecular Magnetism I
MA 20.1–20.10	Tue	15:00–17:45	HSZ 401	Spintronics (other effects)
MA 21.1–21.8	Tue	15:00–17:15	HSZ 403	Spin-Dependent Phenomena in 2D
MA 22.1–22.5	Tue	15:00–16:15	POT 6	Terahertz Spintronics
MA 23.1–23.80	Tue	17:00–19:00	P1	Poster Magnetism I
MA 24.1–24.6	Wed	9:30–11:00	HSZ 02	Molecular Magnetism II
MA 25.1–25.5	Wed	9:30–12:30	HSZ 04	Focus Session: Startups in Magnetism
MA 26.1–26.6	Wed	9:30–11:30	HSZ 401	Non-Skyrmionic Magnetic Textures II
MA 27.1–27.7	Wed	9:30–11:30	HSZ 403	Electron Theory of Magnetism and Correlations
MA 28.1–28.5	Wed	9:30–10:45	POT 6	Bulk Materials: Soft and Hard Permanent Magnets
MA 29.1–29.5	Wed	11:30–12:45	HSZ 02	Neuromorphic Magnetism / Magnetic Logic
MA 30.1–30.4	Wed	15:00–18:00	HSZ 02	PhD Focus Session: Non-equilibrium dynamics in theory and experiment
MA 31.1–31.8	Wed	15:00–17:15	HSZ 04	Functional Antiferromagnetism II
MA 32.1–32.6	Wed	15:00–16:30	HSZ 401	Magnetic Imaging Techniques I
MA 33.1–33.8	Wed	15:00–17:15	HSZ 403	Frustrated Magnets I
MA 34.1–34.8	Thu	9:30–13:00	HSZ 02	Focus Session: Spin-Phonon Coupling
MA 35.1–35.9	Thu	9:30–12:00	HSZ 04	Skyrmions III
MA 36.1–36.6	Thu	9:30–11:00	HSZ 401	Magnetic Particles / Clusters
MA 37.1–37.6	Thu	9:30–11:00	HSZ 403	Magnetic Heuslers
MA 38.1–38.5	Thu	11:30–12:45	HSZ 401	Micro- and Nanostructured Magnetic Materials
MA 39.1–39.5	Thu	11:30–12:45	HSZ 403	Weyl Semimetals
MA 40.1–40.66	Thu	14:00–16:00	P2/EG	Poster Magnetism II
MA 41.1–41.7	Thu	15:00–18:00	HSZ 02	Focus Session: Altermagnetism: Transport, Optics, Excitations
MA 42.1–42.10	Thu	15:00–17:45	HSZ 04	Caloric Effects in Ferromagnetic Materials
MA 43.1–43.7	Thu	15:00–16:45	HSZ 401	Magnetic Imaging Techniques II
MA 44.1–44.9	Thu	15:00–17:30	HSZ 403	Frustrated Magnets II
MA 45	Thu	18:00–19:00	HSZ 04	Members' Assembly
MA 46.1–46.13	Fri	9:30–12:45	HSZ 02	Ultrafast Magnetization Effects II
MA 47.1–47.11	Fri	9:30–12:30	HSZ 04	Skyrmions IV
MA 48.1–48.8	Fri	9:30–11:45	HSZ 401	Magnetic Instrumentation and Characterization
MA 49.1–49.8	Fri	9:30–11:45	HSZ 403	Magnetic Information Technology, Recording, Sensing
MA 50.1–50.7	Fri	9:30–11:15	POT 6	Magnetic Domain Walls (non-skyrmionic)

Members' Assembly of the Magnetism Division

Thu 18:00–19:00 HSZ 04