

Magnetism Division Fachverband Magnetismus (MA)

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Overview of Invited Talks and Sessions

(Lecture halls H2 and H5; Poster P)

Invited Talks

MA 1.1	Mon	10:00–10:30	H5	Utilizing Vacuum States above Surfaces for Imaging and Manipulation of Atomic-Scale Magnetism — ●ANIKA SCHLENHOFF
MA 2.1	Mon	13:30–14:00	H5	Magnon-polarons in magnetic insulators — ●BENEDETTA FLEBUS
MA 2.2	Mon	14:00–14:30	H5	Spin-phonon coupling in non-local spin transport through magnetic insulators — ●REMBERT DUINE
MA 2.3	Mon	14:30–15:00	H5	Double accumulation and anisotropic transport of magneto-elastic bosons in yttrium iron garnet films — ●ALEXANDER A. SERGA
MA 2.5	Mon	15:15–15:45	H5	Magnon polarons and the low-temperature spin-Seebeck effect — ●PIET BROUWER, RICO SCHMIDT
MA 2.6	Mon	15:45–16:15	H5	Magnon-Polarons in different flavors: (anti)ferromagnetic to topological — ●AKASHDEEP KAMRA
MA 2.7	Mon	16:15–16:45	H5	Magnon polarons in antiferromagnetic insulator Cr₂O₃ — ●JING SHI
MA 4.1	Tue	10:00–10:30	H5	2D Magnetic materials — ●ALBERTO MORPURGO
MA 6.1	Tue	13:30–14:00	H5	Spin-charge interconversion with oxide 2-dimensional electron gases — ●MANUEL BIBES
MA 6.2	Tue	14:00–14:30	H5	Spin-to-charge current conversion for logic devices — ●FELIX CASANOVA
MA 6.3	Tue	14:30–15:00	H5	Electrical and thermal generation of spin currents by magnetic graphene — ●B.J VAN WEES, T.S. GHIASI, A.A. KAVERZIN, D.K. DE WAL, A.H. DISMUKES, BART WEES
MA 6.4	Tue	15:15–15:45	H5	Ferroelectric switching of spin-to-charge conversion in GeTe — ●CHRISTIAN RINALDI
MA 6.5	Tue	15:45–16:15	H5	Theory of spin and orbital Edelstein effects in a topological oxide two-dimensional electron gas — ●ANNIKA JOHANSSON, BÖRGE GÖBEL, JÜRGEN HENK, MANUEL BIBES, INGRID MERTIG
MA 6.6	Tue	16:15–16:45	H5	Nonlinear magnetoresistance and Hall effect from spin-momentum locking — ●GIOVANNI VIGNALE
MA 7.1	Wed	10:00–10:30	H5	Anatomy of skyrmion-defect interactions and their impact on detection protocols — ●SAMIR LOUNIS
MA 10.1	Wed	13:30–14:00	H5	Topological spin crystals stabilized by itinerant frustration — ●YUKITOSHI MOTOME
MA 10.2	Wed	14:00–14:30	H5	Formation of spin-hedgehog lattices and giant topological transport properties in chiral magnets — ●NAOYA KANAZAWA
MA 10.3	Wed	14:30–15:00	H5	Topological-chiral magnetic interactions driven by emergent orbital magnetism — ●SERGII GRYSIUK, JAN-PHILIPP HANKE, MARKUS HOFFMANN, JUBA BOUAZIZ, OLENA GOMONAY, GUSTAV BIHLMAYER, SAMIR LOUNIS, YURIY MOKROUSOV, STEFAN BLÜGEL
MA 10.4	Wed	15:15–15:45	H5	Complex spin structures in thin transition metals films and their oxides — ●MATTHIAS BODE
MA 13.1	Thu	10:00–10:30	H5	Magnetism and superconductivity: new physics one atom at a time — ●ALEXANDER BALATSKY

MA 13.3	Thu	10:45–11:15	H5	Magnetic adatom chains on superconducting NbSe₂ — EVA LIEBHABER, LISA M. RÜTTEN, GAEL REECHT, JACOB F. STEINER, SEBASTIAN ROHLF, KAI ROSSNAGEL, FELIX VON OPPEN, ●KATHARINA J. FRANKE
MA 13.5	Thu	11:30–12:00	H5	Yu-Shiba-Rusinov states and ordering of magnetic Impurities near the boundary — ●JELENA KLINOVAJA
MA 13.7	Thu	12:15–12:45	H5	Resonance from antiferromagnetic spin fluctuations for spin-triplet superconductivity in UTe₂ — ●PENGCHENG DAI
MA 14.1	Thu	13:30–14:00	H5	The role of itinerant electrons and higher order magnetic interactions among fluctuating local moments in metallic magnets — ●JULIE STAUNTON
MA 17.1	Fri	10:00–10:30	H5	Emergent electromagnetic response of nanometer-sized spin textures — ●MAX HIRSCHBERGER, TAKASHI KURUMAJI, LEONIE SPITZ
MA 19.1	Fri	13:30–14:00	H5	”Neuromorphic Computing”: A Productive Contradiction in Terms — ●HERBERT JAEGER
MA 19.2	Fri	14:00–14:30	H5	Neuromorphic computing with radiofrequency spintronic devices — ●ALICE MIZRAHI, NATHAN LEROUX, DANIJELA MARKOVIC, DEDALO SANZ HERNANDEZ, JUAN TRASTOY, PAOLO BORTOLOTTI, LEANDRO MARTINS, ALEX JENKINS, RICARDO FERREIRA, JULIE GROLLIER
MA 19.3	Fri	14:40–15:10	H5	Data Storage and Processing in the Cognitive Era — ●GIOVANNI CHERUBINI
MA 19.4	Fri	15:10–15:40	H5	Brain-inspired approaches and ultrafast magnetism for Green ICT — ●THEO RASING

Invited talks of the joint symposium SKM Dissertation Prize 2021 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	10:00–10:25	Audimax 2	Avoided quasiparticle decay from strong quantum interactions — ●RUBEN VERRESEN, RODERICH MOESSNER, FRANK POLLMANN
SYSD 1.2	Mon	10:25–10:50	Audimax 2	Co-evaporated Hybrid Metal-Halide Perovskite Thin-Films for Optoelectronic Applications — ●JULIANE BORCHERT
SYSD 1.3	Mon	10:55–11:20	Audimax 2	Attosecond-fast electron dynamics in graphene and graphene-based interfaces — ●CHRISTIAN HEIDE
SYSD 1.4	Mon	11:20–11:45	Audimax 2	The thermodynamics of stochastic systems with time delay — ●SARAH A.M. LOOS
SYSD 1.5	Mon	11:50–12:15	Audimax 2	First Results on Atomically Resolved Spin-Wave Spectroscopy by TEM — ●BENJAMIN ZINGSEM

Invited talks of the joint symposium Potentials for NVs sensing magnetic phases, textures and excitations (SYNV)

See SYNV for the full program of the symposium.

SYNV 1.1	Mon	13:30–14:00	Audimax 2	Harnessing Nitrogen Vacancy Centers in Diamond for Next-Generation Quantum Science and Technology — ●CHUNHUI DU
SYNV 1.2	Mon	14:00–14:30	Audimax 2	Nanoscale imaging of spin textures with single spins in diamond — ●PATRICK MALETINSKY
SYNV 1.3	Mon	14:30–15:00	Audimax 2	Spin-based microscopy of 2D magnetic systems — ●JÖRG WRACHTRUP
SYNV 1.4	Mon	15:15–15:45	Audimax 2	Exploring antiferromagnetic order at the nanoscale with a single spin microscope — ●VINCENT JACQUES
SYNV 1.5	Mon	15:45–16:15	Audimax 2	Nanoscale magnetic resonance spectroscopy with NV-diamond quantum sensors — ●DOMINIK BUCHER

Invited talks of the joint symposium Novel phases and dynamical properties of magnetic skyrmions (SYMS)

See SYMS for the full program of the symposium.

SYMS 1.1	Tue	10:00–10:30	Audimax 2	Imaging skyrmions in synthetic antiferromagnets by single spin relaxometry — ●AURORE FINCO
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SYMS 1.2	Tue	10:30–11:00	Audimax 2	Microwave spectroscopy of the skyrmionic states in a chiral magnetic insulator — ●AISHA AQEEL, JAN SAHLIGER, TAKUYA TANIGUCHI, STEFAN MAENDL, DENIS METTUS, HELMUTH BERGER, ANDREAS BAUER, MARKUS GARST, CHRISTIAN PFLEIDERER, CHRISTIAN H. BACK
SYMS 1.3	Tue	11:15–11:45	Audimax 2	Archimedean Screw in Driven Chiral Magnets — ●NINA DEL SER Frustration-driven magnetic fluctuations as the origin of the low-temperature skyrmion phase in $\text{Co}_7\text{Zn}_7\text{Mn}_6$ — ●JONATHAN WHITE, VICTOR UKLEEV, KOSUKE KARUBE, PETER DERLET, CHEN-NAN WANG, HUBERTUS LUETKENS, DAISUKE MORIKAWA, AKIKO KIKKAWA, LUCILE MANGIN-THRO, ANDREW WILDES, YUICHI YAMASAKI, YUICHI YOKOYAMA, LE YU, CINTHIA PIAMONTEZE, NICOLAS JAOUEN, YUSUKE TOKUNAGA, HENRIK RØNNOW, TAKA-HISA ARIMA, YOSHINORI TOKURA, JONATHAN WHITE
SYMS 1.4	Tue	11:45–12:15	Audimax 2	
SYMS 1.5	Tue	12:15–12:45	Audimax 2	Magnetic Skyrmions as Topological Multi-Media Influencers — ●SEBASTIÁN A. DÍAZ

Invited talks of the joint symposium Facets of many-body quantum chaos (SYQC)

See SYQC for the full program of the symposium.

SYQC 1.1	Tue	13:30–14:00	Audimax 2	Holographic interpretation of SYK quantum chaos — ●ALEXANDER ALT LAND
SYQC 1.2	Tue	14:00–14:30	Audimax 2	Non-Fermi liquids and the lattice — ●SEAN HARTNOLL
SYQC 1.3	Tue	14:30–15:00	Audimax 2	Dual-unitary circuits: non-equilibrium dynamics and spectral statistics — ●BRUNO BERTINI
SYQC 1.4	Tue	15:15–15:45	Audimax 2	Post-Ehrenfest many-body quantum interferences in ultracold atoms — ●STEVEN TOMSOVIC
SYQC 1.5	Tue	15:45–16:15	Audimax 2	Dynamics in unitary and non-unitary quantum circuits — ●VEDIKA KHEMANI

Invited talks of the joint symposium Curvilinear condensed matter (SYCL)

See SYCL for the full program of the symposium.

SYCL 1.1	Wed	10:00–10:30	Audimax 2	Curvature Effects and Topological Defects in Chiral Condensed and Soft Matter — ●AVADH SAXENA
SYCL 1.2	Wed	10:30–11:00	Audimax 2	Topology and Transport in nanostructures with curved geometries — ●CARMINE ORTIX
SYCL 2.1	Wed	11:15–11:45	Audimax 2	Superconductors and nanomagnets evolve into 3D — ●OLEKSANDR DOBROVOLSKIY
SYCL 2.2	Wed	11:45–12:15	Audimax 2	Properties of domain walls and skyrmions in curved ferromagnets — ●VOLODYMYR KRAVCHUK
SYCL 2.3	Wed	12:15–12:45	Audimax 2	X-ray three-dimensional magnetic imaging — ●VALERIO SCAGNOLI

Prize talks of the joint Awards Symposium (SYAW)

See SYAW for the full program of the symposium.

SYAW 1.1	Wed	13:30–14:00	Audimax 1	Organic semiconductors - materials for today and tomorrow — ●ANNA KÖHLER
SYAW 1.2	Wed	14:00–14:30	Audimax 1	PbTe/CdTe nanocomposite as an attractive candidate for room-temperature infrared detectors — ●GRZEGORZ KARCEWSKI
SYAW 1.3	Wed	14:40–15:10	Audimax 1	Fingerprints of correlation in electronic spectra of materials — ●LUCIA REINING
SYAW 1.4	Wed	15:10–15:40	Audimax 1	Artificial Spin Ice: From Correlations to Computation — ●NAËMI LEO
SYAW 1.5	Wed	15:40–16:10	Audimax 1	From microwave optomechanics to quantum transport – carbon nanotubes as highly versatile hybrid devices — ●ANDREAS K. HÜTTEL

SYAW 1.6	Wed	16:20–16:50	Audimax 1	Quantum spin dynamics of a spin-1/2 antiferromagnetic Heisenberg-Ising chain — ●ZHE WANG
SYAW 1.7	Wed	16:50–17:20	Audimax 1	Imaging the effect of electron transfer at the atomic scale — ●LAERTE PATERA

Invited talks of the joint symposium Spain as Guest of Honor (SYES)

See SYES for the full program of the symposium.

SYES 1.1	Wed	13:30–13:40	Audimax 2	DFMC-GEFES — ●JULIA HERRERO-ALBILLOS
SYES 1.2	Wed	13:40–14:10	Audimax 2	Towards Phononic Circuits based on Optomechanics — ●CLIVIA M. SOTOMAYOR TORRES
SYES 1.3	Wed	14:10–14:40	Audimax 2	Adding magnetic functionalities to epitaxial graphene — ●RODOLFO MIRANDA
SYES 1.4	Wed	14:45–15:15	Audimax 2	Bringing nanophotonics to the atomic scale — ●JAVIER AIZPURUA
SYES 1.5	Wed	15:15–15:45	Audimax 2	Hydrodynamics of collective cell migration in epithelial tissues — ●JAUME CASADEMUNT
SYES 1.6	Wed	15:45–16:15	Audimax 2	Understanding the physical variables driving mechanosensing — ●PERE ROCA-CUSACHS

Invited talks of the joint symposium Attosecond and coherent spins: New frontiers (SYAS)

See SYAS for the full program of the symposium.

SYAS 1.1	Thu	10:00–10:30	Audimax 2	Ultrafast Coherent Spin-Lattice Interactions in Iron Films — ●STEVEN JOHNSON
SYAS 1.2	Thu	10:30–11:00	Audimax 2	Ultrafast spin, charge and nuclear dynamics: ab-initio description — ●SANGEETA SHARMA, JOHN KAY DEWHURST
SYAS 1.3	Thu	11:15–11:45	Audimax 2	Light-wave driven Spin Dynamics — ●MARTIN SCHULTZE, MARKUS MÜNZENBERG, SANGEETA SHARMA
SYAS 1.4	Thu	11:45–12:15	Audimax 2	All-coherent subcycle switching of spins by THz near fields — ●CHRISTOPH LANGE, STEFAN SCHLAUDERER, SEBASTIAN BAIERL, THOMAS EBNET, CHRISTOPH SCHMID, DARREN VALOVICIN, ANATOLY ZVEZDIN, ALEXEY KIMEL, ROSTISLAV MIKHAYLOVSKIY, RUPERT HUBER
SYAS 1.5	Thu	12:15–12:45	Audimax 2	Ultrafast optically-induced spin transfer in ferromagnetic alloys — ●STEFAN MATHIAS

Invited talks of the joint symposium The Rise of Photonic Quantum Technologies – Practical and Fundamental Aspects (SYPQ)

See SYPQ for the full program of the symposium.

SYPQ 1.1	Fri	10:00–10:30	Audimax 2	Quantum dots operating at telecom wavelengths for photonic quantum technology — ●SIMONE LUCA PORTALUPI
SYPQ 1.2	Fri	10:30–11:00	Audimax 2	Photonic graph states for quantum communication and quantum computing — ●STEFANIE BARZ
SYPQ 1.3	Fri	11:00–11:30	Audimax 2	Rare-earth ion doped solids at sub-Kelvins: practical and fundamental aspects — ●PAVEL BUSHEV
SYPQ 1.4	Fri	11:45–12:15	Audimax 2	Quantum Light and Strongly Correlated Electronic States in a Moiré Heterostructure — ●BRIAN GERARDOT
SYPQ 1.5	Fri	12:15–12:45	Audimax 2	Quantum communication in fibers and free-space — ●RUPERT URSIN

Sessions

MA 1.1–1.9	Mon	10:00–12:30	H5	Surface Magnetism (joint session MA/O)
MA 2.1–2.8	Mon	13:30–17:00	H5	Focus Session: Magnon Polarons - Magnon-Phonon Coupling and Spin Transport (joint session MA/HL)
MA 3.1–3.20	Mon	13:30–16:30	P	Posters Magnetism I

MA 4.1–4.4	Tue	10:00–11:15	H5	Spin-Dependent 2D Phenomena
MA 5.1–5.22	Tue	10:00–13:00	P	Posters Magnetism II
MA 6.1–6.6	Tue	13:30–16:45	H5	Focus Session: Spin-Charge Interconversion (joint session MA/HL)
MA 7.1–7.12	Wed	10:00–13:15	H5	Skyrmions I (joint session MA/KFM)
MA 8.1–8.4	Wed	10:00–12:10	H2	INNOMAG e.V. Dissertationspreis / Ph.D. Thesis Prize (2020)
MA 9.1–9.4	Wed	12:30–14:20	H2	INNOMAG e.V. Diploma/Master Prize (2021)
MA 10.1–10.7	Wed	13:30–16:30	H5	Focus Session: Higher-Order Magnetic Interactions - Implications in 2D and 3D Magnetism I
MA 11.1–11.34	Wed	13:30–16:30	P	Posters Magnetism III
MA 12.1–12.3	Wed	14:30–16:15	H2	INNOMAG e.V. Dissertationspreis / Ph.D. Thesis Prize (2021)
MA 13.1–13.7	Thu	10:00–12:45	H5	PhD Focus Session: Symposium on "Strange Bedfellows - Magnetism Meets Superconductivity" (joint session MA/AKjDPG) (joint session MA/TT)
MA 14.1–14.6	Thu	13:30–15:15	H5	Focus Session: Higher-Order Magnetic Interactions - Implications in 2D and 3D Magnetism II
MA 15.1–15.47	Thu	13:30–16:30	P	Posters Magnetism IV
MA 16	Thu	17:30–18:30	MVMA	General Assembly of the Division of Magnetism
MA 17.1–17.12	Fri	10:00–13:15	H5	Skyrmions II (joint session MA/KFM)
MA 18.1–18.42	Fri	10:00–13:00	P	Posters Magnetism V
MA 19.1–19.5	Fri	13:30–16:30	H5	PhD Focus Session: Symposium on "Magnetism - A Potential Platform for Big Data?" (joint session MA/O/AKjDPG)

General Assembly of the Division of Magnetism

Thursday 17:30–18:30 MVMA