

Magnetism Division Fachverband Magnetismus (MA)

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Overview of Invited Talks and Sessions

(Lecture rooms HSZ 01, 04, 101, 301, 401, and 403; Posters P2-EG, OG1, OG2, OG3, and OG4)

INNOMAG e.V. Dissertation Prize and Master/Diplom Prize 2017)

Monday 15:00–17:00 HSZ 01
Please attend!

Tutorial: Micromagnetic Simulations

MA 1.1	Sun	16:00–16:45	HSZ 401	An overview of mumax3 with a spotlight on its newest features — •JONATHAN LELIAERT
MA 1.2	Sun	16:45–17:30	HSZ 401	Micromagnetics simulations with MicroMagnum and OMNeS — •KAI LITZIUS
MA 1.3	Sun	17:45–18:30	HSZ 401	Computational micromagnetics with JOOMMF — •HANS FANGOHR

PhD-Student Symposium "Quantum Magnets: Frustration and Topology in Experiment and Theory (jointly with young DPG (jDPG)": Invited Talks

MA 17.1	Tue	9:45–10:30	HSZ 04	Frustrated Quantum Magnets: Theory — •MATTHIAS VOJTA
MA 17.2	Tue	10:30–11:15	HSZ 04	Ground State Selection in Quantum Pyrochlore Magnets — •BRUCE D. GAULIN
MA 17.3	Tue	11:30–12:00	HSZ 04	Effects of anisotropic exchange in strong spin-orbit coupled magnets — •NATALIA PERKINS
MA 17.4	Tue	12:00–12:30	HSZ 04	Numerical Approaches to Frustrated Quantum Magnets — •STEPHAN RACHEL
MA 17.6	Tue	13:45–14:15	HSZ 04	Nuclear Probes on Frustrated Magnets — •PHILIPPE MENDELS
MA 17.7	Tue	14:15–14:45	HSZ 04	Complex spin structures and multifunctional magnetism — •VIVIEN ZAPF

Invited Talks

MA 10.1	Mon	15:00–15:30	HSZ 04	Magnetoelastic coupling and lattice dynamics in magnetocaloric materials — •MARKUS ERNST GRUNER
MA 22.1	Tue	9:30–10:00	HSZ 401	Tuning the zero-point spin-fluctuations of single adatoms — •JULEN IBÁÑEZ-AZPIROZ

Focus Session "Antiferromagnetic Spintronics"

MA 2.1	Mon	9:30–10:00	HSZ 01	Electrical Control of Quantum Coherent Phenomena in Insulating Antiferromagnets — •ARNE BRAATAS
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MA 2.2	Mon	10:00–10:15	HSZ 01	Route towards topological antiferromagnetic spin-orbitronics — •LIBOR ŠMEJKAL
MA 2.3	Mon	10:15–10:45	HSZ 01	Electronic and magnonic spin transport in antiferromagnets — •VINCENT BALTZ
MA 2.4	Mon	11:00–11:30	HSZ 01	Staggering antiferromagnetic domain wall velocity in a staggered spin-orbit field — •OLENA GOMONAY
MA 2.6	Mon	11:45–12:15	HSZ 01	Current induced switching of an antiferromagnet — •KEVIN W. EDMONDS

Focus Session “Magnon Transport in Metallic Spin Textures”

MA 45.1	Wed	15:45–16:15	HSZ 04	Manipulating Room Temperature Magnetic Skyrmions — •AXEL HOFFMANN
MA 45.2	Wed	16:15–16:45	HSZ 04	Spin wave caustics and channelling in chiral spin systems — •JOO-VON KIM
MA 45.3	Wed	17:00–17:30	HSZ 04	Snell’s Law for Spin Waves — •JOHANNES STIGLOHER
MA 45.4	Wed	17:30–17:45	HSZ 04	Magnon-skyrmion scattering in chiral magnets — •MARKUS GARST
MA 45.5	Wed	17:45–18:00	HSZ 04	Frequency-division multiplexing in magnonic networks by spin-wave caustics — •FRANK HEUSSNER

Focus Session “Magnetic Correlations in Mesoscopic Spin Structures”

MA 32.1	Wed	9:30–10:00	HSZ 01	Collective modes in magnonic vortex crystals — •GUIDO MEIER
MA 32.2	Wed	10:00–10:30	HSZ 01	Stability of interfacial Skyrmions, Solitons and Bound Monopoles: How to store Energy in topological magnetic Quasiparticles. — •ELENA VEDMEDENKO
MA 32.3	Wed	10:30–11:00	HSZ 01	Exploring the statistical physics of frustrated spin systems with artificial spin ice — •IAN GILBERT
MA 32.4	Wed	11:15–11:45	HSZ 01	Skyrmions in [Pt/Co/Ir] multilayers at room temperature — •KATHARINA ZEISSLER
MA 32.5	Wed	11:45–12:15	HSZ 01	Artificial magnets as model systems : from the fragmentation of magnetization to the seminal square ice model — •BENJAMIN CANALS

Focus Session “Topology meets Magnetism”

MA 53.1	Thu	15:00–15:30	HSZ 01	Topological phases for magnons and electrons in the skyrmion lattice — •JOAQUÍN FERNANDEZ-ROSSIER
MA 53.2	Thu	15:30–16:00	HSZ 01	Thermal Hall Effect of Spin Excitations in Quantum Magnets — •MAX HIRSCHBERGER
MA 53.3	Thu	16:15–16:45	HSZ 01	Magnon-mediated Dzyaloshinskii-Moriya torques, heat pumping, and spin Nernst effect — •ALEXEY KOVALEV
MA 53.4	Thu	16:45–17:15	HSZ 01	Magnon companion pieces to electronic topological materials — •ALEXANDER MOOK
MA 53.5	Thu	17:15–17:45	HSZ 01	Nonreciprocal propagation of elementary excitations in noncentrosymmetric magnets — •YOSHINORI ONOSE

Invited talks of the joint symposium SYCE

See SYCE for the full program of the symposium.

SYCE 1.1	Mon	15:00–15:30	HSZ 02	Ferroelectric domain walls: from conductors to insulators and back again — •PETRO MAKSYMOVYCH
SYCE 1.2	Mon	15:30–16:00	HSZ 02	Zoology of skyrmions and the role of magnetic anisotropy in the stability of skyrmions — •ISTVAN KEZSMARKI, SANDOR BORDACS, JONATHAN WHITE, VLADIMIR TSURKAN, ALOIS LOIDL, PETER MILDE, HIROYUKI NAKAMURA, ANDREY LEONOV
SYCE 1.3	Mon	16:00–16:30	HSZ 02	Magnetic imaging of topological phenomena in ferroic materials — •WEIDA WU

SYCE 1.4	Mon	17:00–17:30	HSZ 02	Topological skyrmion textures in chiral magnets — ●MARKUS GARST
SYCE 1.5	Mon	17:30–18:00	HSZ 02	Learning through ferroelectric domain dynamics in solidstate synapses — SÖREN BOYN, GWENDAL LECERF, STÉPHANE FUSIL, SYLVAIN SAÏGHI, AGNÈS BARTHÉLÉMY, JULIE GROLLIER, VINCENT GARCIA, ●MANUEL BIBES

Invited talks of the joint symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Fri	10:30–11:00	HSZ 02	Going Beyond Conventional Functionals with Scaling Corrections and Pairing Fluctuations — ●WEITAO YANG
SYES 1.2	Fri	11:00–11:30	HSZ 02	Multi-reference density functional theory — ●ANDREAS SAVIN
SYES 1.3	Fri	11:30–12:00	HSZ 02	Density functionals from machine learning — ●KIERON BURKE
SYES 1.4	Fri	12:00–12:30	HSZ 02	Taming Memory-Dependence in Time-Dependent Density Functional Theory — ●NEEPA MAITRA
SYES 1.5	Fri	12:30–13:00	HSZ 02	Quantum Embedding Theories — ●FRED MANBY

Sessions

MA 1.1–1.3	Sun	16:00–18:30	HSZ 401	Tutorial: Micromagnetic Simulations
MA 2.1–2.6	Mon	9:30–12:15	HSZ 01	Focus Session: Antiferromagnetic Spintronics
MA 3.1–3.12	Mon	9:30–12:45	HSZ 101	Magnetic Textures: Statics and experimental imaging
MA 4.1–4.13	Mon	9:30–13:00	HSZ 204	Transport: Topological Insulators (jointly with DS, MA, HL, O)
MA 5.1–5.10	Mon	9:30–12:15	HSZ 401	Magnetization/Demagnetization Dynamics
MA 6.1–6.9	Mon	9:30–11:45	HSZ 403	Magnetic Instrumentation and Characterization
MA 7.1–7.9	Mon	10:00–13:00	MER 02	Analytical Electron Microscopy: SEM and TEM-based Material Analysis
MA 8.1–8.4	Mon	10:30–12:10	HSZ 04	SKM Dissertation-Prize 2017
MA 9.1–9.5	Mon	15:00–18:00	HSZ 02	Novel Functionality and Topology-Driven Phenomena in Ferroics and Correlated Electron Systems (DF with MA, KR, MI, TT and DS)
MA 10.1–10.12	Mon	15:00–18:30	HSZ 04	Caloric Effects in Ferromagnetic Materials
MA 11	Mon	15:00–17:00	HSZ 101	INNOMAG e.V. Dissertationspreis und Diplom-/Masterpreis 2017
MA 12.1–12.12	Mon	15:00–18:15	HSZ 204	Transport: Graphene and Carbon Nanostructures (jointly with DY, DS, HL, MA, O)
MA 13.1–13.11	Mon	15:00–18:00	HSZ 304	Transport: Topological Phases (jointly with DS, MA, HL, O)
MA 14.1–14.9	Mon	15:00–17:30	HSZ 401	Magnetization / Demagnetization Dynamics II
MA 15.1–15.13	Mon	15:00–18:30	HSZ 403	Magnetic Heuslers, Half-metals and Oxides (jointly with TT)
MA 16.1–16.5	Mon	17:30–18:45	HSZ 401	Spin Dynamics: Magnetic relaxation and Gilbert Damping
MA 17.1–17.8	Tue	9:30–15:00	HSZ 04	PhD Symposium: Quantum Magnets: Frustration and Topology in Experiment and Theory (jointly with Young DPG (jDPG))
MA 18.1–18.14	Tue	9:30–13:15	HSZ 103	Transport: Quantum Coherence and Quantum Information Systems - Theory (jointly with MA, HL)
MA 19.1–19.8	Tue	9:30–11:45	HSZ 201	Transport: Topological Semimetals 1 (jointly with DS, MA, HL, O)
MA 20.1–20.13	Tue	9:30–13:00	HSZ 301	Bio- and Molecular Magnetism
MA 21.1–21.13	Tue	9:30–13:00	HSZ 304	Correlated Electrons: Frustrated Magnets - Strong Spin-Orbit Coupling 1
MA 22.1–22.10	Tue	9:30–12:30	HSZ 401	Surface Magnetism (Joint Session with O)
MA 23.1–23.10	Tue	9:30–12:15	HSZ 403	Spin Dynamics and Transport: Ultrafast Effect
MA 24.1–24.6	Tue	9:30–12:20	GER 37	Focus: Microwave and THz Properties, Developments and Applications of Dielectric Materials
MA 25.1–25.13	Tue	9:30–13:30	WIL B321	Ferroics - Domains, Domain Walls and Skyrmions I

MA 26.1–26.8	Tue	14:00–16:00	HSZ 101	Thin Films: Magnetic Coupling Phenomena / Exchange Bias
MA 27.1–27.7	Tue	14:00–15:45	HSZ 301	Spintronics (incl. Quantum Dynamics)
MA 28.1–28.7	Tue	14:00–15:45	HSZ 401	Spin Dynamics and Transport: Domain Walls
MA 29.1–29.5	Tue	14:00–15:15	HSZ 403	Spin dependent Transport Phenomena
MA 30.1–30.8	Tue	18:30–20:30	P1A	Electronic structure of Surfaces: Magnetism and Spin Phenomena
MA 31.1–31.7	Tue	18:30–20:30	P2-EG	Ultrafast Electron and Spin Dynamics
MA 32.1–32.5	Wed	9:30–12:15	HSZ 01	Focus Session: Magnetic Correlations in Mesoscopic Spin Structures
MA 33.1–33.13	Wed	9:30–13:00	HSZ 03	Transport: Quantum Coherence and Quantum Information Systems - Experiment (jointly with MA, HL)
MA 34.1–34.13	Wed	9:30–13:00	HSZ 04	Spin Dynamics and Transport: Magnonics
MA 35.1–35.13	Wed	9:30–12:45	HSZ 101	Magnetic Particles / Clusters
MA 36.1–36.12	Wed	9:30–12:45	HSZ 201	Transport: Molecular Electronics and Photonics (jointly with CPP, HL, MA, O)
MA 37.1–37.11	Wed	9:30–12:30	HSZ 401	Micro- and Nanostructured Magnetic Materials
MA 38.1–38.10	Wed	9:30–12:15	HSZ 403	Electron Theory of Magnetism and Correlations
MA 39.1–39.6	Wed	9:30–11:30	MER 02	X-Ray Imaging, Holography, Ptychography and Tomography
MA 40.1–40.1	Wed	15:00–15:30	HSZ 04	Walter Schottky Prize Award (PV IX)
MA 41.1–41.11	Wed	15:00–18:00	HSZ 101	Micromagnetism / Computational Magnetism
MA 42.1–42.10	Wed	15:00–17:45	HSZ 204	Transport: Topological Semimetals 2 (jointly with DS, MA, HL, O)
MA 43.1–43.10	Wed	15:00–18:00	HSZ 401	Topological Insulators I (jointly with DS, HL, O, TT)
MA 44.1–44.9	Wed	15:00–17:30	HSZ 403	PhD Symposium Quantum Magnets (contributed talks)
MA 45.1–45.5	Wed	15:45–18:00	HSZ 04	Focus Session: Magnon Transport in Metallic Spin Textures
MA 46.1–46.8	Thu	9:30–13:00	HSZ 03	Focus Session on 2D Materials: Ballistic Quantum Transport in Graphene (jointly with DY, DS, HL, MA, O)
MA 47.1–47.14	Thu	9:30–13:15	HSZ 04	Spin Hall Effects and Skyrmions I
MA 48.1–48.14	Thu	9:30–13:15	HSZ 101	Spin Dynamics and Transport: Spin Excitations and Spin Torque Phenomena
MA 49.1–49.11	Thu	9:30–12:30	HSZ 401	Surface Magnetism 2 (Joint Session with O)
MA 50.1–50.9	Thu	9:30–12:00	HSZ 403	Spincaloric Transport (jointly with TT)
MA 51.1–51.10	Thu	9:30–12:45	POT 251	Topological Insulators I (joined session with TT)
MA 52.1–52.6	Thu	14:45–16:45	POT 251	Topological Insulators II (joined session with TT)
MA 53.1–53.5	Thu	15:00–17:45	HSZ 01	Focus Session: Topology meets Magnetism
MA 54.1–54.11	Thu	15:00–18:00	HSZ 04	Spin Hall Effects and Skyrmions II
MA 55.1–55.11	Thu	15:00–18:00	HSZ 101	Thin Films: Magnetic Anisotropy
MA 56.1–56.11	Thu	15:00–18:00	HSZ 403	Bulk Materials: Soft and hard permanent magnets
MA 57.1–57.8	Thu	15:00–17:15	WIL B321	Multiferroics (DF and MA)
MA 58.1–58.8	Fri	9:30–11:30	HSZ 03	Transport: Spintronics, Spincalorics and Magnetotransport (jointly with DS, HL, MA)
MA 59.1–59.8	Fri	9:30–11:30	HSZ 04	Topological Insulators II (jointly with DS, HL, O, TT)
MA 60.1–60.10	Fri	9:30–12:00	HSZ 101	Magnetic Materials: Applications and Multielement Bulk Materials
MA 61.1–61.8	Fri	9:30–11:30	HSZ 401	Skyrmion Dynamics
MA 62.1–62.8	Fri	9:30–11:45	HSZ 403	Magnetic Imaging (Experimental Techniques)
MA 63.1–63.10	Fri	9:30–12:30	POT 251	Topological Insulators III (joined session with TT)
MA 64.1–64.69	Fri	9:30–13:00	P2-EG	Poster 1
MA 65.1–65.31	Fri	9:30–13:00	P2-OG1	Poster 2
MA 66.1–66.27	Fri	9:30–13:00	P2-OG2	Poster 3
MA 67.1–67.30	Fri	9:30–13:00	P2-OG3	Poster 4
MA 68.1–68.28	Fri	9:30–13:00	P2-OG4	Poster 5
MA 69.1–69.5	Fri	10:30–13:00	HSZ 02	Frontiers of Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond

General Meeting of the Magnetism Division (Fachverband Magnetismus)

Thursday 18:00–19:00 HSZ 04

All members of the Magnetism Section are invited to participate!