

Magnetism Division
Fachverband Magnetismus (MA)
 Celebrating its 60th anniversary (founded 1956)

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Overview of Invited Talks and Sessions
 (Lecture rooms H31, H32, H33, H34; Poster B1)

Thyssen-Krupp Electrical Steel Dissertationspreis

Monday 15:00–17:00 H32

Four candidates will compete for the prize. Please attend!

For details see <http://www.dpg-physik.de/dpg/gliederung/fv/ma/dissertationspreis.html>

General Meeting of the Magnetism Division (Fachverband Magnetismus)

Thursday 18:30–19:30 H32

All members of the Magnetism Section are requested to attend!

Tutorial: Spin Hall Effect and Spin-orbit Torques

MA 1.1	Sun	16:00–16:45	H17	Introduction to Spin Hall Effect — ●CHRISTIAN BACK
MA 1.2	Sun	17:00–17:45	H17	Magnetisation of ferromagnetic nanostructures manipulated by spin-orbit torques — ●STEFANIA PIZZINI
MA 1.3	Sun	17:45–18:30	H17	Spin Hall effect and spin-orbit torque from material-specific theory — ●YURIY MOKROUSOV

Symposium "Quantum Signatures in Magnetism (SYQS)"

See SYQS for the abstracts of the symposium.

SYQS 1.1	Wed	15:00–15:30	H1	Magnonic macroscopic quantum states and supercurrents — ●BURKARD HILLEBRANDS, DMYTRO A. BOZHKO, ALEXANDER A. SERGA
SYQS 1.2	Wed	15:30–16:00	H1	Elementary excitations of magnetic insulators and its heterostructures with metals — ●GERRIT BAUER
SYQS 1.3	Wed	16:00–16:30	H1	Cavity Spintronics — ●CAN-MING HU
SYQS 1.4	Wed	16:45–17:15	H1	Hybrid Quantum Systems - Coupling Color Centers to Superconducting Cavities — ●JOHANNES MAJER
SYQS 1.5	Wed	17:15–17:45	H1	Quantum enhanced sensing with single spins in diamond — ●FEDOR JELEZKO

Invited Talks

MA 5.1	Mon	9:30–10:00	H34	Néel-type skyrmions in a type-I multiferroic compound — ●ISTVAN KEZSMARKI
MA 30.1	Wed	9:30–10:00	H33	Spin-orbit torques and charge pumping in crystalline magnets — ●CHIARA CICCARELLI

MA 46.1	Thu	15:00–15:30	H33	Advanced magneto-optical microscopy: Magnetolectric sensors, spin-waves, and beyond — ●JEFFREY MCCORD
MA 54.1	Fri	9:30–10:00	H34	Itinerant Magnetism in the Parent Iron-Based Superconductors: hidden frustration, nematic transitions, and spin-orbit coupling — ●ILYA EREMIN

Focus Session “Magnetism as seen by neutrons”

MA 14.1	Tue	9:30–10:00	H32	Breakthrough neutron spectroscopy for quantum magnetism — ●ANDREY ZHELUDEV
MA 14.2	Tue	10:00–10:30	H32	Topological magnetism as seen by neutrons — ●RODERICH MOESSNER
MA 14.3	Tue	10:45–11:15	H32	Magnetism at heterostructures and interfaces — ●HANS BOSCHKER
MA 14.4	Tue	11:15–11:45	H32	Vortex matter: from superconductivity to skyrmions — ●SEBASTIAN MÜHLBAUER
MA 14.5	Tue	11:45–12:15	H32	Neutron spectroscopy – Collective excitations in (un)conventional superconductors — ●JITAE PARK

Focus Session “Terahertz radiation and magnetism”

MA 40.1	Thu	9:30–10:00	H32	Sub-cycle terahertz electronics and magnonics: control and nanoscopy — ●RUPERT HUBER
MA 40.2	Thu	10:00–10:30	H32	Probing and controlling ultrafast magnetism with terahertz electromagnetic pulses — ●TOBIAS KAMPFRATH
MA 40.3	Thu	10:45–11:15	H32	THz Spintronics: Magnetotransport and Magnonics — ●ZUANMING JIN
MA 40.4	Thu	11:15–11:45	H32	Precessional spin motion and magnetization quenching induced by intense Terahertz pulses — ●CHRISTOPH HAURI

Focus Session “Disorder Engineering as a Tool for Materials Science”

MA 45.1	Thu	15:00–15:30	H32	Charge carrier scattering and electronic transport in graphene — ●MIKHAIL KATSNELSON
MA 45.2	Thu	15:30–16:00	H32	Electrons in disordered systems: extensions to the coherent potential approximation for short- and long-ranged order effects — ●JULIE STAUNTON
MA 45.3	Thu	16:15–16:45	H32	Percolation and other models for quenched disorder in materials, and some consequences of this disorder on physical properties. — ●KURT BINDER
MA 45.4	Thu	16:45–17:15	H32	The Impact of Disorder on Transport in crystalline Phase Change Materials — ●MATTHIAS WUTTIG

Focus Session "Ultrafast spin currents for spin-orbitronics: from metals to topological insulators"

MA 52.1	Fri	9:30–10:00	H32	Experimental separation of various mechanisms leading to laser-pulse-induced magnetization precession in (Ga,Mn)As — ●PETR NEMEC
MA 52.2	Fri	10:00–10:30	H32	Ultrafast photocurrents and quantized conductance in 3D topological insulators — ●ALEXANDER HOLLEITNER
MA 52.3	Fri	10:45–11:15	H32	Real-time time-dependent DFT for spin dynamics in magnets — ●STEFANO SANVITO
MA 52.4	Fri	11:15–11:45	H32	Spin transport and spin-orbit interaction at terahertz frequencies: spectroscopy and applications — ●TOM SEIFERT
MA 52.5	Fri	11:45–12:15	H32	Driving currents by magnetization dynamics in systems with broken inversion symmetry — ●FRANK FREIMUTH

Sessions

MA 1.1–1.3	Sun	16:00–18:30	H17	Tutorial: Spin Hall Effect and Spin-Orbit Torques
MA 2.1–2.6	Mon	9:30–11:00	H31	Magnetic Materials I
MA 3.1–3.9	Mon	9:30–12:00	H32	Micro- and nanostructured Materials
MA 4.1–4.9	Mon	9:30–12:00	H33	Bio- und molekularer Magnetismus
MA 5.1–5.13	Mon	9:30–13:30	H34	Spin Textures and magnetic Phase Transitions
MA 6.1–6.11	Mon	9:45–13:00	H22	Transport: Quantum Coherence and Quantum Information Systems - Experiment (Joint session of HL, MA and TT organized by TT)
MA 7.1–7.10	Mon	15:00–17:45	H18	Transport: Topological Insulators - 2D (Joint session of DS, HL, MA, O and TT organized by TT)
MA 8.1–8.9	Mon	15:00–17:30	S052	Magnetic Surface Excitations
MA 9.1–9.12	Mon	15:00–18:15	H31	Spincaloric Transport (jointly with TT)
MA 10	Mon	15:00–17:00	H32	Thyssen-Krupp Electrical Steel Ph. D. Thesis Award (Dissertationspreis)
MA 11.1–11.10	Mon	15:00–17:45	H33	Magnetic Thin Films I
MA 12.1–12.12	Tue	9:30–12:45	H22	Transport: Quantum Coherence and Quantum Information Systems - Theory 1 (Joint session of HL, MA and TT organized by TT)
MA 13.1–13.7	Tue	9:30–11:15	H31	Magnetic Materials II
MA 14.1–14.5	Tue	9:30–12:15	H32	Focus: Magnetism as seen by neutrons
MA 15.1–15.9	Tue	9:30–12:00	H33	Magnetic Thin Films II
MA 16.1–16.11	Tue	9:30–12:30	H34	Magnetization and Demagnetization Dynamics I
MA 17.1–17.89	Tue	9:30–12:30	Poster B1	Poster Session I
MA 18.1–18.4	Tue	10:15–11:45	H53	Topical session: Caloric Effects in ferroic materials I - Magnetocalorics
MA 19.1–19.7	Tue	11:30–13:15	H31	Magnetic Materials III
MA 20.1–20.6	Tue	14:00–15:45	H18	Transport: Topological Insulators - 3D (Joint session of DS, HL, MA, O and TT organized by TT)
MA 21.1–21.4	Tue	14:00–15:00	H22	Transport: Quantum Coherence and Quantum Information Systems - Theory 2 (Joint session of HL, MA and TT organized by TT)
MA 22.1–22.5	Tue	14:00–15:15	H31	Magnetic Semiconductors (jointly with HL)
MA 23.1–23.6	Tue	14:00–15:30	H32	Magnetic Materials and Caloric Effects
MA 24.1–24.10	Tue	18:15–20:30	Poster E	Electronic Structure: Surface Magnetism and Spin Phenomena
MA 25.1–25.13	Wed	9:30–13:15	H22	Transport: Graphene (Joint session of DS, DY, HL, MA, O and TT organized by TT)
MA 26.1–26.13	Wed	9:30–13:15	H22	Transport: Graphene (Joint session of DS, DY, HL, MA, O and TT organized by TT)
MA 27.1–27.7	Wed	9:30–12:50	H25	Focus Session: Skyrmions meet Multiferroicity
MA 28.1–28.9	Wed	9:30–12:00	H31	Surface Magnetism I (jointly with O)
MA 29.1–29.10	Wed	9:30–12:15	H32	Spintronics (incl. quantum dynamics) (jointly with HL, TT)
MA 30.1–30.12	Wed	9:30–13:15	H33	Spin-Torque Phenomena
MA 31.1–31.12	Wed	9:30–12:45	H34	Magnetization and Demagnetization Dynamics II
MA 32.1–32.5	Wed	15:00–17:00	H4	Scanning Probe Microscopy and Spin Phenomena
MA 33.1–33.9	Wed	15:00–17:30	H31	Surface Magnetism II (jointly with O)
MA 34.1–34.10	Wed	15:00–17:45	H32	Topological Insulators (jointly with DS, HL, O, TT)
MA 35.1–35.12	Wed	15:00–18:15	H33	Spin dependent Transport Phenomena
MA 36.1–36.12	Wed	15:00–18:15	H34	Magnetization and Demagnetization Dynamics III
MA 37.1–37.13	Thu	9:30–13:00	H23	Transport: Molecular Electronics and Photonics 1 (Joint session of CPP, DS, HL, MA, O and TT organized by TT)
MA 38.1–38.9	Thu	9:30–12:50	H25	Multiferroics I (DF with MA)
MA 39.1–39.14	Thu	9:30–13:15	H31	Magnetic Particles
MA 40.1–40.4	Thu	9:30–11:45	H32	Focus: Terahertz radiation and magnetism
MA 41.1–41.9	Thu	9:30–12:00	H33	Magnetic Coupling Phenomena
MA 42.1–42.11	Thu	9:30–12:30	H34	Magnetic Heuslers, Half-Metals and Oxides (jointly with TT)

MA 43.1–43.4	Thu	15:00–16:00	H23	Transport: Molecular Electronics and Photonics 2 (Joint session of CPP, DS, HL, MA, O and TT organized by TT)
MA 44.1–44.11	Thu	15:00–18:00	H31	Spininjection / Spin currents in heterostructures
MA 45.1–45.4	Thu	15:00–17:15	H32	Focus: Disorder Engineering as a Tool for Material Science
MA 46.1–46.11	Thu	15:00–18:30	H33	Magnetic Measurement Methods
MA 47.1–47.9	Thu	15:00–17:30	H34	Multiferroics II (jointly with DF, KR, TT)
MA 48.1–48.72	Thu	15:00–18:00	Poster B1	Poster Session II
MA 49.1–49.7	Thu	16:15–18:30	H23	Transport: Spintronics and Magnetotransport (Joint session of DS, HL, MA and TT organized by TT)
MA 50	Thu	18:30–19:30	H32	General Meeting of the Magnetism Division (Fachverband Magnetismus)
MA 51.1–51.6	Fri	9:30–11:30	H13	Magnetic Semiconductors
MA 52.1–52.5	Fri	9:30–12:15	H32	Focus: Ultrafast spin currents for spin-orbitronics: from metals to topological insulators
MA 53.1–53.8	Fri	9:30–11:45	H33	Magnetic Scattering Methods
MA 54.1–54.11	Fri	9:30–13:00	H34	Electron Theory of Magnetism and Micromagnetic Simulations

Symposium "Caloric Effects in Ferroic Materials (SYCE)"

See SYCE for the abstracts of the symposium.

SYCE 1.1	Mon	15:00–15:30	H1	Multicaloric effects in metamagnetic Heusler materials — ●ANTONI PLANES
SYCE 1.2	Mon	15:30–16:00	H1	Multicaloric effect in biological systems: a case of nerve action — ●MATJAZ VALANT, LAWRENCE J. DUNNE, ANNA-KARIN AXELSSON, FLORIAN LE GOUPIL, GEORGE MANOS
SYCE 1.3	Mon	16:00–16:30	H1	Optimizing the electrocaloric effect by first-principles simulations: The role of strain and defects — ●ANNA GRÜNEBOHM
SYCE 1.4	Mon	16:45–17:15	H1	Giant inverse barocaloric effects in ferroelectric ammonium sulphate — POL LLOVERAS, ENRIC STERN-TAULATS, MARIA BARRIO, JOSEP LLUIS TAMARIT, SAM CROSSLEY, WEI LI, VLADIMIR POMJAKUSHIN, ANTONI PLANES, LLUIS MAÑOSA, NEIL MATHUR, ●XAVIER MOYA
SYCE 1.5	Mon	17:15–17:45	H1	TiNiCu-based thin films for elastocaloric cooling — ●ECKHARD QUANDT, CHRISTOPH CHLUBA

Symposium "Topological Insulators: Status Quo and Future Directions (SYTI)"

See SYTI for the abstracts of the symposium.

SYTI 1.1	Wed	9:30–10:10	H1	Topological insulators and topological superconductors — ●SHOUCHENG ZHANG
SYTI 1.2	Wed	10:10–10:50	H1	Three-dimensional topological insulators and superconductors — ●YOICHI ANDO
SYTI 1.3	Wed	10:50–11:30	H1	Interplay of magnetic and electronic states in pyrochlore iridates — ●LEON BALENTS
SYTI 1.4	Wed	11:40–12:20	H1	Magnetic imaging of edge states — ●KATHRYN MOLER
SYTI 1.5	Wed	12:20–13:00	H1	Sub-nm wide edge states at the dark side of a weak topological insulator — ●MARKUS MORGENSTERN

Symposium "Frontiers of Electronic Structure Theory: Focus on Topology and Transport (SYES)"

See SYES for the abstracts of the symposium.

SYES 1.1	Fri	9:30–10:00	H1	Intrinsic Transport Coefficients and Momentum Space Berry Curvatures — ●ALLAN H MACDONALD
SYES 1.2	Fri	10:00–10:30	H1	Berry phase linked spin-orbit torques in Ferromagnetic and Antiferromagnetic systems — ●JAIRO SINOVA

SYES 1.3	Fri	10:30–11:00	H1	Transport in Topological Insulators and Topological Superconductors: In Search of Majorana Fermions — ●EWELINA HANKIEWICZ
SYES 1.4	Fri	11:15–11:45	H1	Engineering Topological Quantum States: From 1D to 2D. — ●JELENA KLINOVAJA
SYES 1.5	Fri	11:45–12:15	H1	Skyrmions – Topological magnetization solitons for future spintronics — ●STEFAN BLÜGEL