

Magnetism Division Fachverband Magnetismus (MA)

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Overview of Invited Talks and Sessions

(lecture rooms H3, H10, H22 and H23; poster A and B1)

Invited Talks

MA 1.1	Mon	10:15–10:45	H10	The magnetic compass of migratory birds: from behaviour to molecules and cognition — ●HENRIK MOURITSEN
MA 3.1	Mon	10:15–10:45	H3	Antiferromagnetic interlayer coupling in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ / SrRuO_3 superlattices — ●IONELA VREJOIU
MA 6.1	Mon	14:00–14:30	H10	Heusler alloy films for spintronics — ●TERUNOBU MIYAZAKI, DAISUKE WATANABE, SHIGEMI MIZUKAMI, FENG WU, TAKAHIDE KUBOTA, SUMITO TSUNEGI, HIROSHI NAGAHAMA, MIKIHICO OOGANE, YASUO ANDO
MA 6.2	Mon	14:30–15:00	H10	Heusler alloy based magnetic read heads — ●STEFAN MAAT
MA 14.1	Wed	9:30–10:00	H10	Ultrafast spin-orbit excitations in ferromagnets probed by fs x-ray pulses — ●HERMANN A. DÜRR
MA 17.1	Wed	14:00–14:30	H10	Current-induced magnetization dynamics — ●MATHIAS KLÄUI
MA 17.2	Wed	14:30–15:00	H10	Ultrafast switching of magnetic vortex cores – The role of the internal energy — ●RICCARDO HERTEL
MA 22.1	Thu	9:30–10:00	H10	Tailoring the spin functionality of a hybrid metal-organic interface by means of alkali metal doping — ●MIRKO CINCHETTI, SABINE NEUSCHWANDER, JAN-PETER WÜSTENBERG, ALEXANDER FISCHER, MARTIN AESCHLIMANN
MA 26.1	Thu	14:00–14:30	H10	Magnonics - Exploring spin waves on the nanoscale — ●DIRK GRUNDLER
MA 26.2	Thu	14:30–15:00	H10	Spin dynamics of complex metallic magnets — ●PAWEŁ BUCZEK, ARTHUR ERNST, LEONID SANDRATSKII
MA 32.1	Fri	10:15–10:45	H10	Light-Induced Magnetization in Colloidal Semiconductor Nanocrystals — ●GERD BACHER, LARS SCHNEIDER, REMI BEAULAC, PAUL I. ARCHER, DANIEL R. GAMELIN

Invited and Topical Talks of the Focused Session “Topological Defects in Electronic Systems” (with TT)

Organization: Roderich Moessner (MPI-PKS Dresden)

TT 13.1	Tue	9:30–10:00	H20	Skymions in Chiral Magnets — ●ULRICH K. RÖSSLER, ANDREI A. LEONOV, ANNA B. BUTENKO, ALEXEI N. BOGDANOV
TT 13.2	Tue	10:00–10:30	H20	Dirac Strings and Magnetic Monopoles in the Spin Ice, $\text{Dy}_2\text{Ti}_2\text{O}_7$ — ●DAVID JONATHAN PRYCE MORRIS, ALAN TENNANT, SANTIAGO GRIGERA, BASTIAN KLEMKE, CLAUDIO CASTELNOVO, RODERICH MOESSNER, CLEMENS CZTERNASTY, MICHAEL MEISSNER, KIRRILY RULE, JENS-UWE HOFFMANN, KLAUS KIEFER, DAMIEN SLOBINSKY, ROBIN PERRY
TT 13.3	Tue	10:30–11:00	H20	Manifestations of monopole physics in spin ice materials — ●CLAUDIO CASTELNOVO, RODERICH MOESSNER, SHIVAJI SONDHI
TT 13.4	Tue	11:00–11:30	H20	Skymion Lattices in Pure Metals and Strongly Doped Semiconductors — ●CHRISTIAN PFLEIDERER
TT 13.5	Tue	11:45–12:15	H20	Skymion lattice in MnSi — ●ACHIM ROSCH
TT 13.6	Tue	12:15–12:45	H20	Topological Insulators in Applied Fields: Magnetoelectric Effects and Exciton Condensation — ●JOEL MOORE

TT 13.7	Tue	12:45–13:15	H20	Probing non-Abelian statistics with quasiparticle interferometry — •KIRILL SHTENDEL
TT 13.8	Tue	13:15–13:45	H20	Spin Hall effects in HgTe Quantum Well Structures — •LAURENS W. MOLENKAMP

Topical Talks of the Focused Session “Single Nanomagnets”

Organization: Michael Farle (Universität Duisburg-Essen)

MA 12.1	Tue	10:45–11:15	H22	Exploring the frontiers in cluster magnetism from a theorist’s perspective — •GUSTAVO PASTOR
MA 12.2	Tue	11:15–11:45	H22	Magnetic chirality in the electron microscope: Progress and Applications — •PETER SCHATTSCHEIDER
MA 12.3	Tue	11:45–12:15	H22	Stochastic resonance of a nanomagnet excited by spin transfer torque — •ILYA KRIVOROTOV
MA 12.4	Tue	12:15–12:45	H22	Exploring single nanomagnets with photoelectron microscopy — •FLORIAN KRONAST

Invited Talks of the Joint Symposium “Spin-Orbit Coupling and Spin Relaxation in Graphene and Carbon Nanotubes” (SYGN)

See SYGN for the full program of the Symposium.

SYGN 1.1	Mon	14:00–14:35	H1	Models for spin-orbit coupling in graphene — •FRANCISCO GUINEA
SYGN 1.2	Mon	14:35–15:10	H1	Spin-orbit coupling and spin relaxation in carbon nanotube quantum dots — •FERDINAND KUEMMETH
SYGN 1.3	Mon	15:10–15:45	H1	Spin-orbit interaction in carbon nanotubes probed in pulsed magnetic fields — •SUNGHO JHANG, MAGDALENA MARGANSKA, YURII SKOURSKI, DOMINIK PREUSCHE, BENOIT WITKAMP, MILENA GRIFONI, HERRE VAN DER ZANT, JOACHIM WOSNITZA, CHRISTOPH STRUNK
SYGN 1.4	Mon	16:00–16:35	H1	Wigner molecules and spin-orbit coupling in carbon-nanotube quantum dots — •MASSIMO RONTANI
SYGN 1.5	Mon	16:35–17:10	H1	Spin relaxation and decoherence in graphene quantum dots — •GUIDO BURKARD
SYGN 1.6	Mon	17:10–17:45	H1	Spin transport in graphene field effect transistors — •BART VAN WEES

Invited Talks of the Joint Symposium “Magnetism and Medicine” (SYMM)

See SYMM for the full program of the Symposium.

SYMM 1.1	Wed	9:30–10:00	H1	Magnetic resonance imaging: an ongoing success story — •JENS FRAHM
SYMM 1.2	Wed	10:00–10:30	H1	Biomedical nanomagnetism: A spin through new possibilities — •KANNAN KRISHNAN
SYMM 1.3	Wed	10:30–11:00	H1	Recent SQUID applications in medicine — •HANS KOCH
SYMM 1.4	Wed	11:00–11:30	H1	Biomedical Magnetic Resonance using Hyperpolarized Gases and Liquids — •LAURA SCHREIBER
SYMM 1.5	Wed	11:30–12:00	H1	Recent Developments in Healthcare Biomagnetics — •QUENTIN PANKHURST
SYMM 1.6	Wed	12:00–12:30	H1	SQUIDS for Noninvasive Magnetogastrography — •ALAN BRADSHAW, LEO CHENG, ANDREW PULLAN, WILLIAM RICHARDS

Invited Talks of the Joint Symposium “Density Functional Theory and Beyond for Real Materials” (SYDF)

See SYDF for the full program of the Symposium.

SYDF 1.1	Thu	14:45–15:15	H1	Downfolded Self-Energy of Many-Electron Systems and the Hubbard U — •FERDI ARYASETIAWAN
SYDF 1.2	Thu	15:15–15:45	H1	LDA+Gutzwiller method for correlated electron systems — •ZHONG FANG

SYDF 1.3	Thu	15:45–16:15	H1	Localized and itinerant states in d/f-electron systems unified by $GW@LDA+U$ — ●HONG JIANG
SYDF 1.4	Thu	16:30–17:00	H1	Giant polaronic effects in solids and nanostructures — ●ANDREA MARINI
SYDF 1.5	Thu	17:00–17:30	H1	Excitation energies with time-dependent density <i>matrix</i> functional theory — ●EVERT JAN BAERENDS, KLAAS J. H. GIESBERTZ, OLEG GRITSENKO, KATARZYNA PERNAL
SYDF 1.6	Thu	17:30–18:00	H1	Calculations of multipoles in magnetic metals and insulators — ●LARS NORDSTRÖM

Sessions

MA 1.1–1.1	Mon	10:15–10:45	H10	Bio- and Molecular Magnetism
MA 2.1–2.10	Mon	10:45–13:15	H10	Bio- and Molecular Magnetism
MA 3.1–3.9	Mon	10:15–12:45	H3	Multiferroics I (with DF, KR, DS)
MA 4.1–4.9	Mon	11:00–13:15	H22	Magnetic Coupling Phenomena/ Exchange Bias
MA 5.1–5.8	Mon	11:00–13:00	H23	Micro- and Nanostructured Magnetic Materials I
MA 6.1–6.17	Mon	14:00–19:00	H10	Magnetic Thin Films I (Heusler Alloys)
MA 7.1–7.14	Mon	14:00–17:45	H3	Multiferroics II (with DF, KR, DS)
MA 8.1–8.14	Mon	15:15–19:00	H22	Magnetic Shape Memory Alloys
MA 9.1–9.16	Mon	15:15–19:30	H23	Magnetic Particles, Clusters
MA 10.1–10.80	Tue	10:45–13:45	Poster A	Poster I
MA 11.1–11.8	Tue	9:30–13:45	H20	FS: Topological Defects in Electronic Systems (with TT)
MA 12.1–12.4	Tue	10:45–12:45	H22	FS: Single Nanomagnets
MA 13.1–13.4	Tue	14:00–16:15	H3	ThyssenKrupp Dissertationspreis der AG Magnetismus
MA 14.1–14.12	Wed	9:30–12:45	H10	Spin Dynamics / Spin Torque I
MA 15.1–15.11	Wed	10:15–13:00	H22	Magnetic Half-metals and Oxides I
MA 16.1–16.10	Wed	10:15–12:45	H23	Micro- and Nanostructured Magnetic Materials II
MA 17.1–17.15	Wed	14:00–18:30	H10	Spin Dynamics / Spin Torque II
MA 18.1–18.15	Wed	15:15–19:15	H3	Magnetic Thin Films II
MA 19.1–19.6	Wed	15:15–16:45	H22	Magnetic Half-metals and Oxides II
MA 20.1–20.5	Wed	17:00–18:15	H22	Micromagnetism / Computational Magnetism
MA 21.1–21.10	Wed	15:15–18:00	H23	Magnetic Materials
MA 22.1–22.12	Thu	9:30–12:45	H10	Spin Dynamics / Spin Torque III
MA 23.1–23.10	Thu	10:15–12:45	H3	Micro- and Nanostructured Magnetic Materials III
MA 24.1–24.10	Thu	10:15–12:45	H22	Spinelectronics / Spin Injection in Heterostructures
MA 25.1–25.10	Thu	10:15–12:45	H23	Surface Magnetism / Magnetic Imaging I
MA 26.1–26.10	Thu	14:00–17:00	H10	Spin Dynamics / Spin Torque IV
MA 27.1–27.6	Thu	17:15–18:45	H10	Spin Structures and Magnetic Phase Transitions
MA 28.1–28.14	Thu	15:15–19:00	H3	Spin-dependent Transport Phenomena
MA 29.1–29.6	Thu	15:15–16:45	H22	Magnetic Semiconductors I
MA 30.1–30.5	Thu	17:00–18:15	H22	Electron Theory of Magnetism
MA 31.1–31.15	Thu	15:15–19:15	H23	Surface Magnetism / Magnetic Imaging II
MA 32.1–32.1	Fri	10:15–10:45	H10	Magnetic Semiconductors II
MA 33.1–33.95	Fri	11:00–14:00	Poster B1	Poster II

Assignment of the Posters to the Topics

MA 10.1-10.12:	Bio- and Molecular Magnetism
MA 10.13-10.28:	Multiferroics
MA 10.29-10.35:	Magnetic Coupling Phenomena/Exchange Bias
MA 10.36-10.59:	Magnetic Thin Films
MA 10.60-10.63:	Magnetic Shape Memory Alloys
MA 10.64-10.71:	Magnetic Particles/Clusters
MA 10.72-10.76:	Magnetic Half-metals and Oxides
MA 10.77-10.80:	Magnetic Materials
MA 33.1-33.2:	Electron Theory of Magnetism
MA 33.3-33.11:	Magnetic Semiconductors
MA 33.12-33.29:	Micro- and Nanostructured Magnetic Materials
MA 33.30-33.37:	Micromagnetism / Computational Magnetism

MA 33.38-33.47: Surface Magnetism / Magnetic Imaging
MA 33.48-33.55: Spin Structures and Magnetic Phase Transitions
MA 33.56-33.58: Spinelectronics / Spin Injection in Heterostructures
MA 33.59-33.83: Spin Dynamics / Spin Torque
MA 33.84-33.96: Spin-dependent Transport Phenomena

Annual General Meeting of the Magnetism Division

Mittwoch 18:45–19:45 H10

- Bericht des Vorsitzenden
- Aussprache
- Verschiedenes