

## Magnetism Division Fachverband Magnetismus (MA)

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### Overview of Invited Talks and Sessions

(Lecture rooms: H 1012, H 0112, H 1012, EB 202, EB 301; Posters: A)

#### Thyssen-Krupp Electrical Steel Dissertationspreis

Monday 09:30–11:30 EB 202

Four candidates will compete for the prize. Please attend!

#### Tutorial: Density Functional Theory: A computational path to interesting spin-textures and novel skyrmions

MA 1.1	Sun	16:05–16:50	H 1012	<b>Introduction to Spin-Density-Functional Theory</b> — ●NICOLE HELBIG
MA 1.2	Sun	16:50–17:35	H 1012	<b>Determining chiral magnetism from density functional theory</b> — ●STEFAN BLÜGEL
MA 1.3	Sun	17:45–18:30	H 1012	<b>Magneto-transport properties in spiralling spin textures</b> — ●YURIY MOKROUSOV

#### PhD-Student Symposium "Quantum Phase Transitions: Emergent Phenomena beyond elementary excitations": Invited Talks (jointly with jDPG)

MA 18.1	Tue	9:30–10:15	EB 301	<b>Experimental Studies of Quantum Phase Transitions</b> — ●ANDREW MACKENZIE
MA 18.2	Tue	10:15–10:45	EB 301	<b>Metallic Quantum Ferromagnets</b> — ●MANUEL BRANDO
MA 18.4	Tue	11:30–12:15	EB 301	<b>Theoretical Concepts of Quantum Phase Transitions</b> — ●MATTHIAS VOJTA
MA 18.5	Tue	12:15–12:45	EB 301	<b>Quantum criticality and beyond</b> — ●ANDREW SCHOFIELD
MA 18.7	Tue	14:00–14:30	EB 301	<b>Quantum Criticality in Quantum Magnets</b> — ●CHRISTIAN RÜEGG
MA 18.9	Tue	14:45–15:15	EB 301	<b>Beyond quantum phase transitions</b> — ●WILHELM ZWERGER

#### Invited Talks

MA 4.1	Mon	9:30–10:00	H 1012	<b>Fabrication of individual nano-magnets and nano-magnet arrays by Focused Electron Beam Induced Deposition (FEBID)</b> — ●ANDREAS BERGER
MA 9.1	Mon	15:00–15:30	H 0112	<b>Ultra-fast three terminal perpendicular Spin-Orbit MRAM</b> — ●GILLES GAUDIN
MA 28.1	Wed	11:30–12:00	H 0110	<b>The Future of Magnetoreception Research in Animals</b> — ●ERICH PASCAL MALKEMPER
MA 53.1	Fri	9:30–10:00	EB 202	<b>Antiferromagnetic spintronics</b> — ●TOMAS JUNGWIRTH

**Focus Session “Progress in Spin-Polarized Electron Spectroscopies”**

MA 11.1	Mon	15:00–15:45	EB 301	<b>Acoustic und standing spin wave modes in ultra-thin 3d metal films</b> — ●HARALD IBACH
MA 11.2	Mon	15:45–16:15	EB 301	<b>Magnetic structure and magnetic anisotropy on the atomic scale</b> — ●CHUNLEI GAO
MA 11.3	Mon	16:30–17:00	EB 301	<b>Spin-resolved photoelectron spectroscopy with high efficiency and potential of full momentum analysis</b> — ●SHIGEMASA SUGA
MA 11.4	Mon	17:00–17:30	EB 301	<b>High-efficiency spin-resolved ARPES with a TOF-based exchange polarimeter</b> — ●CHRIS JOZWIAK
MA 11.5	Mon	17:30–18:00	EB 301	<b>Prospects of Multichannel Spin Detection</b> — ●GERD SCHÖNHENSE

**Focus Session “Towards quantitative magnetic measurements at ultimate spatial resolution with electrons”**

MA 26.1	Wed	9:30–10:00	EB 202	<b>Magnetic measurements at high resolution in an electron microscope: a review.</b> — ●JOSEF ZWECK
MA 26.2	Wed	10:00–10:30	EB 202	<b>Observation and Manipulation of Magnetic Skyrmions</b> — ●SHINICHIRO SEKI
MA 26.3	Wed	10:45–11:15	EB 202	<b>Visualization Of Three Dimensional Magnetization Of Magnetic Nanostructures</b> — ●CHARUDATTA PHATAK
MA 26.4	Wed	11:15–11:45	EB 202	<b>Utilizing chirality to explore local magnetic moments</b> — ●PETER SCHATTSCHNEIDER
MA 26.5	Wed	11:45–12:15	EB 202	<b>Linking magnetic properties to nanoscale spectral and spatial features</b> — ●THOMAS THERSLEFF

**Focus Session “Ultra-fast magnetism under electronic nonequilibrium conditions”**

MA 31.1	Wed	15:00–15:30	H 1012	<b>Ultrafast optical tuning of ferromagnetism in EuO via the carrier density</b> — ●MANFRED FIEBIG
MA 31.2	Wed	15:30–16:00	H 1012	<b>Intra-atomic exchange in ultrafast magnetism</b> — ●MARTIN WEINELT
MA 31.3	Wed	16:15–16:45	H 1012	<b>Laser induced ultrafast demagnetization in solids: a time-dependent density functional theory perspective</b> — ●SANGEETA SHARMA
MA 31.4	Wed	16:45–17:15	H 1012	<b>Ultrafast control of the exchange interaction with electric fields</b> — ●JOHAN H. MENTINK
MA 31.5	Wed	17:15–17:45	H 1012	<b>Controlling, probing and harnessing the strongest force in magnetism</b> — ●ALEXEY KIMEL

**Focus Session “All-optical magnetic switching”**

MA 41.1	Thu	9:30–10:15	H 1012	<b>Optically-induced magnetisation switching: Experiments and models</b> — ●HANS CHRISTIAN SCHNEIDER
MA 41.2	Thu	10:15–10:45	H 1012	<b>All optical control of magnetic thin films and nanostructures</b> — ●ERIC FULLERTON
MA 41.3	Thu	11:00–11:30	H 1012	<b>All-optical switching: a challenge for its theoretical description</b> — ●ULRICH NOWAK
MA 41.4	Thu	11:30–12:00	H 1012	<b>All-optical helicity-dependent magnetic switching in Tb-Fe</b> — ●RUDOLF BRATSCHITSCH
MA 41.5	Thu	12:00–12:30	H 1012	<b>Ultrafast magnetization dynamics of thin films showing helicity dependent magnetization switching</b> — ●GRÉGORIE MALINOWSKI

**Invited talks of the joint symposium SYDW**

See SYDW for the full program of the symposium.

SYDW 1.1	Mon	9:30–10:00	H 0105	<b>Domain walls: from conductive paths to technology roadmaps</b> — •GUSTAU CATALAN
SYDW 1.2	Mon	10:00–10:30	H 0105	<b>Domain walls and oxygen vacancies - towards reversible control of domain wall conductance</b> — •PATRYCJA PARUCH
SYDW 1.3	Mon	10:30–11:00	H 0105	<b>Novel mechanisms of domain-wall formation</b> — •ANDRES CANO
SYDW 1.4	Mon	11:30–12:00	H 0105	<b>Novel materials at domain walls</b> — •BEATRIZ NOHEDA
SYDW 1.5	Mon	12:00–12:30	H 0105	<b>Controlling and mapping domain wall behaviour in ferroelectrics</b> — •JOHN MARTIN GREGG, JONATHAN WHYTE, RAYMOND MCQUAID, MICHAEL CAMPBELL, AMIT KUMAR, ROGER WHATMORE

**Invited talks of the joint symposium SYNPN**

See SYNPN for the full program of the symposium.

SYNPN 1.1	Tue	9:30–10:00	H 0105	<b>Connectomics: The dense reconstruction of neuronal circuits</b> — •MORITZ HELMSTÄDTER
SYNPN 1.2	Tue	10:00–10:30	H 0105	<b>Whole-brain imaging and analysis of network activity in behaving zebrafish</b> — •MISHA AHRENS
SYNPN 1.3	Tue	10:30–11:00	H 0105	<b>Circuit neurophysics: Theory and biophysics of information-flow through large-scale neuronal systems</b> — •FRED WOLF
SYNPN 1.4	Tue	11:15–11:45	H 0105	<b>Cognitive devices based on ion currents in oxide thin films</b> — •STUART PARKIN
SYNPN 1.5	Tue	11:45–12:15	H 0105	<b>Distributed neuro-physical interfaces: technology and "exciting" biophysics</b> — •SHY SHOHAM

**Invited talks of the joint symposium SYHM**

See SYHM for the full program of the symposium.

SYHM 1.1	Wed	15:00–15:30	H 0105	<b>Amplitude or Higgs Modes in Condensed Matter</b> — •CHANDRA VARMA
SYHM 1.2	Wed	15:30–16:00	H 0105	<b>Higgs Particles for Systems with U(1) Symmetry in Two Dimensions</b> — •LODE POLLET
SYHM 1.3	Wed	16:00–16:30	H 0105	<b>Massive Photons and the Anderson-Higgs Mechanism in Superconductors</b> — •DIRK VAN DER MAREL
SYHM 1.4	Wed	16:45–17:15	H 0105	<b>Amplitude Higgs Mode in 2H-NbSe<sub>2</sub> Superconductor</b> — •MARIE-AUDE MÉASSON, ROMAIN GRASSET, YANN GALLAIS, MAX CAZAYOUS, ALAIN SACUTO, PIERRE RODIÈRE, LAURENT CARIO
SYHM 1.5	Wed	17:15–17:45	H 0105	<b>The Higgs Mode in Disordered Superconductors Close to a Quantum Phase Transition</b> — •AVIAD FRYDMAN, DANIEL SHERMAN, UWE S. PRACHT, BORIS GORSHUNOV, MARTIN DRESSEL

**Invited talks of the joint symposium SYMM**

See SYMM for the full program of the symposium.

SYMM 1.1	Thu	9:30–10:15	H 0105	<b>From MAX to MXene - From 3D to 2D</b> — •MICHEL BARSOUM
SYMM 1.2	Thu	10:15–10:45	H 0105	<b>Structure evolution during low temperature growth of nanolaminate thin films</b> — •J.M. SCHNEIDER, L. SHANG, H. BOLVARDI, Y. JIANG, A. AL GABAN, D. MUSIC, M. TO BABEN
SYMM 1.3	Thu	11:00–11:30	H 0105	<b>Autonomous healing of crack damage in MAX phase ceramics</b> — •WILLEM G. SLOOF
SYMM 1.4	Thu	11:30–12:00	H 0105	<b>Magnetic MAX phases from first principles and thin film synthesis</b> — •JOHANNA ROSEN
SYMM 1.5	Thu	12:00–12:30	H 0105	<b>Weak Field Magneto-Transport Properties of Mn+1AX<sub>n</sub> Phases</b> — •THIERRY OUISSE, LU SHI, BENOIT HACKENS, BENJAMIN PIOT, DIDIER CHAUSSENDE

## Sessions

MA 1.1–1.3	Sun	16:00–18:30	H 1012	<b>Tutorial: Density Functional Theory: A computational path to interesting spin-textures and novel skyrmions</b>
MA 2.1–2.3	Sun	16:00–18:30	H 0107	<b>Tutorial on Ferroics (DF with MA/TT)</b>
MA 3.1–3.12	Mon	9:30–12:45	H 0112	<b>Magnetic Heuslers, Half-metals and Oxides (jointly with TT)</b>
MA 4.1–4.9	Mon	9:30–12:00	H 1012	<b>Micro- and Nanostructured Materials</b>
MA 5	Mon	9:30–11:30	EB 202	<b>Thyssen-Krupp Electrical Steel Dissertationspreis</b>
MA 6.1–6.12	Mon	9:30–12:45	EB 301	<b>Surface Magnetism (Joint Session with O,TT) - Skyrmions</b>
MA 7.1–7.7	Mon	11:30–13:15	EB 202	<b>Magnetic Semiconductors</b>
MA 8.1–8.8	Mon	15:00–18:30	EB 107	<b>Focused Session on Ferroic Domain Walls I (DF with MA)</b>
MA 9.1–9.12	Mon	15:00–18:45	H 0112	<b>Spin Excitations/Spin Torque</b>
MA 10.1–10.14	Mon	15:00–18:45	H 1012	<b>Magnetic Heuslers, Half-metals, Semiconductors and Oxides</b>
MA 11.1–11.5	Mon	15:00–18:00	EB 301	<b>Focus: Progress in Spin-Polarized Electron Spectroscopies</b>
MA 12.1–12.30	Mon	19:00–21:00	Poster C	<b>Poster Session on Ferroic Domain Walls - Multiferroics (DF with KR/MA/TT)</b>
MA 13.1–13.8	Tue	9:30–13:00	EB 107	<b>Focused Session on Ferroic Domain Walls II (DF with MA)</b>
MA 14.1–14.11	Tue	9:30–12:30	H 0112	<b>Electronic Structure of Magnetism, Computational Magnetism</b>
MA 15.1–15.11	Tue	9:30–12:15	H 1012	<b>Magnetic measurement methods</b>
MA 16.1–16.11	Tue	9:30–12:30	EB 202	<b>Bio- and Molecular magnetism</b>
MA 17.1–17.8	Tue	9:30–11:30	ER 270	<b>Spintronics: Excitons and local spins (HL with MA/TT)</b>
MA 18.1–18.16	Tue	9:30–16:30	EB 301	<b>PhD symposium of the Division of Magnetism and the jDPG 2015: Quantum Phase Transitions: Emergent phenomena beyond elementary excitations</b>
MA 19.1–19.70	Tue	9:30–13:00	Poster A	<b>POSTER Ia</b>
MA 20.1–20.47	Tue	9:30–13:00	Poster A	<b>POSTER Ib</b>
MA 21.1–21.6	Tue	14:00–16:00	EB 107	<b>Focused Session on Ferroic Domain Walls III (DF with MA)</b>
MA 22.1–22.13	Wed	9:30–13:00	EB 107	<b>Multiferroics I (DF with DS/KR/MA/TT)</b>
MA 23.1–23.8	Wed	9:30–11:30	H 0110	<b>Spincaloric Transport I (jointly with TT)</b>
MA 24.1–24.11	Wed	9:30–12:30	H 0112	<b>Magnetic Materials I</b>
MA 25.1–25.9	Wed	9:30–11:45	H 1012	<b>Magnetic Imaging</b>
MA 26.1–26.6	Wed	9:30–12:30	EB 202	<b>Focus: Towards quantitative magnetic measurements at ultimate spatial resolution with electrons</b>
MA 27.1–27.13	Wed	9:30–13:00	EB 301	<b>Magnetization / Demagnetization Dynamics I</b>
MA 28.1–28.2	Wed	11:30–12:15	H 0110	<b>Bio-Magnetism (Magnetoreception)</b>
MA 29.1–29.8	Wed	15:00–17:00	H 0110	<b>Spincaloric Transport II (jointly with TT)</b>
MA 30.1–30.8	Wed	15:00–17:00	H 0112	<b>Magnetic Materials II</b>
MA 31.1–31.5	Wed	15:00–17:45	H 1012	<b>Focus: Ultra-fast magnetism under electronic nonequilibrium conditions</b>
MA 32.1–32.10	Wed	15:00–17:45	EB 202	<b>Spin Structures and Magnetic Phase Transitions</b>
MA 33.1–33.13	Wed	15:00–18:50	EB 107	<b>Multiferroics II (DF with DS/KR/MA/TT)</b>
MA 34.1–34.8	Wed	9:30–11:30	ER 270	<b>Topological insulators: Theory (HL with DS/MA/O/TT)</b>
MA 35.1–35.14	Wed	15:00–18:45	EB 301	<b>Magnetization / Demagnetization Dynamics II</b>
MA 36.1–36.5	Wed	11:45–13:00	ER 270	<b>Topological insulators: Transport (HL with DS/MA/O/TT)</b>
MA 37.1–37.6	Wed	15:00–16:30	ER 270	<b>Topological insulators: Structure and electronic structure (HL with DS/MA/O/TT)</b>
MA 38.1–38.12	Thu	9:30–12:45	H 0110	<b>Magnetic Nanoparticles</b>
MA 39.1–39.8	Thu	9:30–11:30	H 0112	<b>Spin-dependent Transport Phenomena I</b>
MA 40.1–40.9	Thu	10:00–12:30	ER 164	<b>Spintronics: Mobile electrons and holes (HL with MA/TT)</b>
MA 41.1–41.5	Thu	9:30–12:30	H 1012	<b>Focus: All-optical magnetic switching</b>
MA 42.1–42.10	Thu	9:30–12:00	EB 202	<b>Topological Insulators I (jointly with DS, HL, O, TT)</b>
MA 43.1–43.9	Thu	9:30–12:00	EB 301	<b>Magnetization / Demagnetization Dynamics III</b>
MA 44.1–44.9	Thu	15:00–17:30	H 0110	<b>Surface Magnetism (Joint Session with O) - Adatoms on surfaces</b>
MA 45.1–45.11	Thu	15:00–18:00	H 0112	<b>Spin-dependent Transport Phenomena II</b>
MA 46.1–46.13	Thu	15:00–18:30	H 1012	<b>Magnetic Thin Films I</b>
MA 47.1–47.11	Thu	15:00–17:45	EB 202	<b>Topological Insulators II (jointly with DS, HL, O, TT)</b>
MA 48.1–48.9	Thu	15:00–17:15	EB 301	<b>Magnetization / Demagnetization Dynamics IV</b>
MA 49.1–49.35	Thu	15:00–18:00	Poster A	<b>POSTER II</b>
MA 50	Thu	18:00–19:00	H 0110	<b>Mitgliederversammlung des Fachverbandes Magnetismus</b>
MA 51.1–51.12	Fri	9:30–12:30	H 0112	<b>Magnetic Shape Memory Alloys (Joint Session with MM)</b>

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MA 52.1–52.12	Fri	9:30–12:45	H 1012	<b>Magnetic Thin Films II</b>
MA 53.1–53.9	Fri	9:30–12:00	EB 202	<b>Spintronics (incl. Quantum Dynamics) (jointly with HL, TT)</b>
MA 54.1–54.7	Fri	9:30–11:15	EB 301	<b>Magnetic Coupling Phenomena</b>

### **General Meeting of the Magnetism Division (Fachverband Magnetismus)**

Thursday 18:00–19:00 H 0110

All members of the Magnetism Section are invited to participate!