

Metal and Material Physics Division Fachverband Metall- und Materialphysik (MM)

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Overview of Invited Talks and Sessions

(Lecture halls SCH/A215, SCH/A216, SCH/A251, and SCH/A315; Poster P5)

Invited Talks

MM 2.1	Mon	9:30–10:00	SCH/A251	Deep-Learning and Generative AI for the Discovery of Electron-Phonon Superconductors — ●RICHARD HENNIG
MM 6.1	Mon	15:00–15:30	SCH/A251	Transformation-induced plasticity in zirconia ceramics: simulations and experiments — ●DAVID RODNEY
MM 10.1	Tue	9:30–10:00	SCH/A251	Chemically graded materials for accelerated exploration of the TRIP-TWIP Ti-alloy family — ●LOLA LILENSTEN
MM 24.1	Wed	15:00–15:30	SCH/A251	Recent advances in processing of rare-earth free MnBi magnets by severe plastic deformation — ●ANDREA BACHMAIER, LUKAS WEISSITSCH-REINER, MARTIN KRAUS, MICHAEL MEINDLHUMER, STEFAN WURSTER
MM 29.1	Thu	9:30–10:00	SCH/A251	Three dimensional sub-Ångström resolution imaging from 4D-STEM experiments — ●PHILIPP PELZ
MM 33.1	Thu	15:00–15:30	SCH/A251	LPBF with Ultrashort Laser Pulses - Additive Manufacturing Beyond Current Limits — ●STEFAN NOLTE, HAGEN P. KOHL, LISA MATTHÄUS, TOBIAS ULLSPERGER, DONGMEI LIU, STEPHANIE LIPPMANN
MM 38.1	Fri	9:30–10:00	SCH/A251	Alloy design and deformation behaviour of Mo-based silicide materials — ●MANJA KRUEGER

Invited Talks of the joint Symposium SKM Dissertation Prize 2026 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ/0002	Stochastic-Calculus Approach to Non-equilibrium Statistical Physics — ●CAI DIEBALL
SYSD 1.2	Mon	10:00–10:30	HSZ/0002	Nonuniform magnetic spin textures for sensing, storage and computing applications — ●SABRI KORALTAN
SYSD 1.3	Mon	10:30–11:00	HSZ/0002	Anomalous Quantum Oscillations beyond Onsager's Fermi Surface Paradigm — ●VALENTIN LEEB
SYSD 1.4	Mon	11:00–11:30	HSZ/0002	Coherent Control Schemes for Semiconductor Quantum Systems — ●EVA SCHÖLL
SYSD 1.5	Mon	11:30–12:00	HSZ/0002	On stochastic thermodynamics under incomplete information: Thermodynamic inference from Markovian events — ●JANN VAN DER MEER

Invited Talks of the joint Symposium The Sustainability Challenge: A Decade of Transformation (SYSC)

See SYSC for the full program of the symposium.

SYSC 1.1	Mon	15:00–15:30	HSZ/AUDI	Open-Endedness and Community-Based Approaches to Sustainability Challenges — ●HIROKI SAYAMA
SYSC 1.2	Mon	15:30–16:00	HSZ/AUDI	Education as a Social Tipping Element: Evidence from Climate and Physics Education Research — ●THOMAS SCHUBATZKY

SYSC 1.3	Mon	16:00–16:30	HSZ/AUDI	Mechanistic and Material Perspectives on Enzymatic Hydrolysis of Semicrystalline Polyesters — ●BIRTE HÖCKER
SYSC 1.4	Mon	16:45–17:15	HSZ/AUDI	Decarbonization Options for Industry — ●UWE RIEDEL
SYSC 1.5	Mon	17:15–17:45	HSZ/AUDI	Impacts of Cosmic Dust and Space Debris in the Terrestrial Atmosphere — ●JOHN PLANE

Invited Talks of the joint Symposium AI and Data Challenges behind Emerging Self-Driving Laboratories (SYAI)

See SYAI for the full program of the symposium.

SYAI 1.1	Thu	9:30–10:00	HSZ/AUDI	Data and Experimental Foundations for Reliable Self-Driving Laboratories — ●DR. MARCUS TZE-KIAT NG
SYAI 1.2	Thu	10:00–10:30	HSZ/AUDI	Digital Catalysis - AI for Experiment Planning and Control — ●CHRISTOPH SCHEURER
SYAI 1.3	Thu	10:30–11:00	HSZ/AUDI	Autonomous, Data-Driven Workflows for Materials Acceleration Platforms with pyiron — ●JAN JANSSEN, JOERG NEUGEBAUER
SYAI 1.4	Thu	11:15–11:45	HSZ/AUDI	Machine Learning for Autonomous Optimization and Discovery of Materials — ●PASCAL FRIEDERICH
SYAI 1.5	Thu	11:45–12:15	HSZ/AUDI	Transforming Our View on Transformers in the Sciences — ●KEVIN MAIK JABLONKA

Sessions

MM 1.1–1.1	Sun	16:00–18:15	TRE/MATH	Hands on tutorial: Linking Large Language Models with Digital Workflows for Materials Science Simulations (joint session MM/TUT)
MM 2.1–2.1	Mon	9:30–10:00	SCH/A251	Invited Talk: Richard Hennig
MM 3.1–3.9	Mon	10:15–12:45	SCH/A215	Mechanical Properties and Alloy Design I
MM 4.1–4.9	Mon	10:15–13:00	SCH/A216	Materials for the Storage and Conversion of Energy I
MM 5.1–5.7	Mon	10:15–12:45	SCH/A251	Topical Session: Physics-driven Artificial Intelligence for Materials I
MM 6.1–6.1	Mon	15:00–15:30	SCH/A251	Invited Talk: David Rodney
MM 7.1–7.10	Mon	15:45–18:30	SCH/A215	Mechanical Properties and Alloy Design II
MM 8.1–8.10	Mon	15:45–18:30	SCH/A216	Materials for the Storage and Conversion of Energy II
MM 9.1–9.9	Mon	15:45–18:30	SCH/A251	Topical Session: Physics-driven Artificial Intelligence for Materials II
MM 10.1–10.1	Tue	9:30–10:00	SCH/A251	Invited Talk: Lola Lilensten
MM 11.1–11.6	Tue	10:15–11:45	SCH/A215	Structurally and Chemically Complex Alloys
MM 12.1–12.9	Tue	10:15–12:45	SCH/A216	Materials for the Storage and Conversion of Energy III / Functional Materials I
MM 13.1–13.9	Tue	10:15–12:45	SCH/A251	Data-driven Materials Science: Big Data and Workflows I
MM 14.1–14.5	Tue	11:30–12:45	SCH/A315	Liquid and Amorphous Materials I
MM 15.1–15.7	Tue	14:00–15:45	SCH/A215	Phase Transformations I
MM 16.1–16.7	Tue	14:00–15:45	SCH/A216	Functional Materials II
MM 17.1–17.7	Tue	14:00–15:45	SCH/A251	Data-driven Materials Science: Big Data and Workflows II
MM 18.1–18.6	Tue	14:00–15:30	SCH/A315	Liquid and Amorphous Materials II
MM 19.1–19.49	Tue	18:00–20:00	P5	Poster Session
MM 20.1–20.1	Wed	9:30–10:00	SCH/A251	Topical Talk: Shigenobu Ogata
MM 21.1–21.10	Wed	10:15–13:00	SCH/A215	Phase Transformations II
MM 22.1–22.9	Wed	10:15–12:45	SCH/A216	Data-driven Materials Science: Big Data and Workflows III
MM 23.1–23.5	Wed	10:15–11:30	SCH/A251	Topical Session: Dislocations in Functional Materials I (joint session MM/FM)
MM 24.1–24.1	Wed	15:00–15:30	SCH/A251	Invited Talk: Andrea Bachmaier
MM 25.1–25.5	Wed	15:45–17:00	SCH/A215	Interface Controlled Properties, Nanomaterials, and Microstructure Design I
MM 26.1–26.5	Wed	15:45–17:00	SCH/A216	Transport in Materials: Diffusion, Charge, or Heat Conduction I

MM 27.1–27.5	Wed	15:45–17:15	SCH/A251	Topical Session: Dislocations in Functional Materials II (joint session MM/FM)
MM 28	Wed	17:15–18:45	SCH/A251	Members' Assembly
MM 29.1–29.1	Thu	9:30–10:00	SCH/A251	Invited Talk: Philipp Pelz
MM 30.1–30.6	Thu	10:15–11:45	SCH/A215	Interface Controlled Properties, Nanomaterials, and Microstructure Design II
MM 31.1–31.10	Thu	10:15–13:00	SCH/A216	Transport in Materials: Diffusion, Charge, or Heat Conduction II
MM 32.1–32.6	Thu	10:15–12:45	SCH/A251	Topical Session: Advanced Nanomechanics – Accelerating Materials Physics from the Bottom I
MM 33.1–33.1	Thu	15:00–15:30	SCH/A251	Invited Talk: Stefan Nolte
MM 34.1–34.7	Thu	15:45–17:30	SCH/A215	Hydrogen in Materials I
MM 35.1–35.7	Thu	15:45–17:30	SCH/A216	Additive Manufacturing / Transport in Materials III
MM 36.1–36.5	Thu	15:45–17:15	SCH/A251	Topical Session: Advanced Nanomechanics – Accelerating Materials Physics from the Bottom II
MM 37.1–37.5	Thu	15:45–17:00	SCH/A315	Development of Calculation Methods I
MM 38.1–38.1	Fri	9:30–10:00	SCH/A251	Invited Talk: Manja Krüger
MM 39.1–39.9	Fri	10:15–12:45	SCH/A215	Hydrogen in Materials II
MM 40.1–40.8	Fri	10:15–12:30	SCH/A216	Transport in Materials: Diffusion, Charge, or Heat Conduction IV
MM 41.1–41.9	Fri	10:15–12:45	SCH/A251	Development of Calculation Methods II

Members' Assembly of the Metal and Material Physics Division

Wednesday 17:15–18:45 SCH/A251

- discussion of MM activities
- announcement of the poster awards
- exchange of ideas for the next DPG meeting