



TRR360 International Conference on Constrained Quantum Matter

22.09-25.09.2025

Kloster Ettal

Monday, 22. September

10:00	Arrival + Coffee
10:50	Opening (<i>Rosner Aula</i>)
11:00	Session 1 - Frustrated magnets: spectroscopy and magnetic fields
11:00	<u>Jochen Wosnitza</u> (Helmholtz-Zentrum Dresden-Rossendorf, Dresden, Germany). <i>Frustrated and low-dimensional magnetic materials in high magnetic fields</i>
11:35	<u>Manila Songvilay</u> (Institut Néel, Grenoble, France). <i>Investigating Kitaev interactions in Co honeycomb antiferromagnets</i> (invited)
12:10	<u>Anton Romen</u> (TU Munich, Germany). <i>Spin-phonon coupling and deconfined criticality</i> (internal talk)
12:30	Lunch
14:00	Session 2 - Complex orders
14:00	<u>Yuan Li</u> (Institute of Physics, Beijing, China). <i>Investigation of multi-q magnetic orders and transitions in frustrated honeycomb cobalt oxides</i>
14:35	<u>Roser Valentí</u> (University of Frankfurt, Germany). <i>Complex orders in Moiré systems: a playground for heavy fermion physics</i>
15:10	<u>Manuel Zahn</u> (University of Augsburg, Germany). <i>Emergent mesoscale textures in topological magnets</i> (internal talk)
15:30	Coffee Break + Conference Picture
16:00	Session 3 - Symmetry and topology
16:00	<u>Yoshinori Tokura</u> (RIKEN, Japan). <i>Emergent electric field generation by spin dynamics in topological magnets</i>
16:45	<u>Veronika Sunko</u> (Institute of Science and Technology, Austria). <i>Revealing time reversal symmetry breaking in antiferromagnets</i>
17:20	<u>Yannis Ulrich</u> (MPI for Solid-State Physics, Stuttgart, Germany). <i>Quantum geometry and non-linear Hall effect in topological magnets</i> (internal talk)
17:40	<u>Akmal Hossain</u> (MPI for Solid-State Physics, Stuttgart, Germany). <i>Thermal Hall effect from topological magnons and phonons in the honeycomb magnet $\text{Na}_3\text{Co}_2\text{SbO}_6$</i> (internal talk)
18:00	Dinner
19:30	Poster Session 1

Tuesday, 23. September

8:00 **Breakfast**

9:00 **Session 4 - Topological materials: spectroscopy**

9:00 Milan Orlita (LNCMI-CNRS, Grenoble, France). *Optical spectroscopy of topological materials in high magnetic fields*

9:35 Riccardo Comin (Massachusetts Institute of Technology, USA). *ARPES studies of quantum geometry in solids*

10:10 Felix Schilberth (University of Augsburg, Germany). *Uncovering unconventional phases of kagome materials by optical spectroscopy* (internal talk)

10:30 **Coffee Break**

11:00 **Session 5 - Topological materials: frontiers**

11:00 M. Zahid Hasan (Princeton University, USA). *New Frontiers in Topological Quantum Matter*

11:35 Jeroen van den Brink (IFW Dresden, Germany). *Topological Weyl altermagnetism in CrSb*

12:10 Lin Chen (TU Munich, Germany). *Electrical control of magnetism in topological Weyl semimetal WTe₂* (internal talk)

12:30 **Lunch**

14:00 **Session 6 - Open quantum systems**

14:00 Flore Kunst (University of Nürnberg-Erlangen, Germany). *Non-Hermitian topological phenomena*

14:35 Rosario Fazio (International Centre for Theoretical Physics, Trieste, Italy). *Heat-to-motion conversion in quantum active matter*

15:10 Gloria Isbrandt (TU Munich, Germany). *Anisotropic spin ice on a breathing pyrochlore lattice* (internal talk)

15:30 **Coffee Break**

16:00 **Session 7 – Quantum phenomena**

16:00 Binghai Yan (Penn State University, USA). *Topology-boosted quantum geometry in quantum materials*

16:45 Anna Keselman (Technion University, Haifa, Israel). *J_1 - J_2 triangular lattice antiferromagnet in a magnetic field*

17:20 Bin Shen (University of Augsburg, Germany). *Strange metallicity of pressurized kagome ferromagnet* (internal talk)

17:40 Lichen Wang (MPI for Solid-State Physics, Stuttgart, Germany). *Inelastic photon scattering from correlated 4d metals* (internal talk)

18:00 **Dinner**

19:30 **Poster Session 2**

Wednesday, 24. September

8:00 **Breakfast**

9:00 **Session 8 - Unconventional magnets: neutron scattering**

9:00 Allen Scheie (Los Alamos National Lab, USA). *Quantum spin dynamics in triangular lattice KYbSe₂*

9:35 Oksana Zaharko (Paul Scherrer Institute, Switzerland). *Altermagnet MnF₂, viewed by neutron scattering*

10:10 **Coffee Break**

10:30 **Session 9 - Spin dynamics beyond equilibrium**

10:30 Axel Hoffmann (University of Illinois, Urbana-Champaign, USA). *Hybrid Magnon Modes*

11:05 Alexey Kimel (Radboud University, Nijmegen, Netherlands). *Anti-intuitive Antiferromagnets: from equilibrium to ultrafast dynamics*

11:40 Kirill Vasin (University of Augsburg, Germany). *Magnetic circular dichroism of magnon-polarons in the polar altermagnet Fe₂Mo₃O₈* (internal talk)

12:00 **Lunch**

13:00 **Excursion: Hike**

13:30 **Excursion: Castle Linderhof**

18:30 **Dinner**

20:00 **Career Talk** (only for young, female researchers) (*Walchensee*)
Meeting MGK Board + Summer School Committee (*Rosner Aula*)

Thursday, 25. September

8:00	Breakfast
9:00	Session 10 - Insights from advanced spectroscopies
9:00	<u>Peter Armitage</u> (Johns Hopkins University, Baltimore, USA). <i>2D THz spectroscopy and quantum materials</i>
9:35	<u>Lei Shu</u> (Fudan University, Shanghai, China). <i>Dynamical scaling in a Kitaev honeycomb material $H_3LiIr_2O_6$ revealed by muon spin relaxation</i>
10:10	<u>Denis Mettus</u> (TU Munich, Germany). <i>Non-equilibrium phases in skyrmion lattices</i> (internal talk)
10:30	Coffee Break
11:00	Session 11 - Exotic quantum matter
11:00	<u>Daniele Fausti</u> (University of Nürnberg-Erlangen, Germany). <i>Cavity control of quantum matter phases</i>
11:35	<u>Max Hirschberger</u> (University of Tokyo, Japan). <i>Discovery of a metallic p-wave magnet with commensurate spin helix</i> (internal talk)
12:10	<u>Parisa Mokhtari</u> (University of Augsburg, Germany and University of Tokyo, Japan). <i>Topological thermal Hall effect in centrosymmetric skyrmion-lattice magnet Gd_2PdSi_3</i> (internal talk)
12:30	Lunch
14:00	<i>Departure of the invited guests, Start of the TRR360 Retreat Meeting</i>
14:00	Workshop “Leading diverse teams” (PIs) Part 1 (Ettal)
14:00	Poster Session of Problems (YRs) Part 1 (Rosner Aula)
15:30	Coffee Break
16:00	Workshop “Leading diverse teams” (PIs) Part 2 (Ettal)
16:00	Poster Session of Problems (YRs) Part 2 (Rosner Aula)
17:00	Equity and Diversity Round (YRs) (Rosner Aula)
18:00	Dinner
19:30	Steering Committee Meeting (Ettal)
19:30	MGK Young Researchers Meeting (Rosner Aula)

Friday, 24. September



8:00	Breakfast
9:00	Session 12
9:00	Ö project (Manuel Schleicher)
9:15	MGK project (Lilian Prodan)
9:30	Equity and Diversity (Ina Pietsch)
9:45	Data management (Markus Heyl, Manuel Zahn)
10:05	Administrative Issues (Angela Sarafimovska)
10:30	Coffee Break
11:00	<i>Departure Young Researchers</i>
11:00	Discussion new proposal (PIs) part 1
12:30	Lunch
13:30	Discussion new proposal (PIs) part 2
14:55	<i>Departure PIs</i>