



## Retreat-Meeting SPP2137

### Skymionics Topological Spin Phenomena in Real-Space for Applications

#### Program

13. October 2021

- 12:30      Arrival & lunch
- 14:00      **Christian Pfeiderer** (onsite), Technical University of Munich  
*Welcome & organizational matters*
- 14:30      **Alex Bogdanov** (onsite), IFW Dresden  
*Actual problems in magnetic skyrmion fundamentals*
- 15:00      **Fabian Lux** (onsite), University of Mainz  
*Unified topological characterization of electronic states in spin textures  
from noncommutative K-theory*
- 15:30      Coffee break
- 16:00      **Nina del Ser** (onsite), University of Cologne  
*Archimedean screw in driven chiral magnets*
- 16:30      **Manuel dos Santos Dias** (remote), Forschungszentrum Jülich  
*Chiral multi-spin multi-site interactions*
- 17:00      **Sebastian A. Diaz** (onsite), University of Duisburg-Essen  
*Steering of Majorana braiding via Skyrmion-vortex pairs*
- 18:00      Dinner

## 14. October 2021

- 9:00 **Nicolai Kiselev** (onsite), Forschungszentrum Jülich  
*Magnetic Skyrmion braids*
- 9:30 **Maria Azhar** (onsite), Karlsruhe Institute for Technology (KIT)  
*Screw dislocations in chiral magnets*
- 10:00 **Johanna Jochum** (onsite), Technical University of Munich  
*Emergence of a fluctuating magnetic ground state in  $Mn_{1-x}Fe_xSi$*
- 10:30 Coffee break
- 11:00 Poster session
- 12:30 Lunch
- 14:00 **Bernd Rellinghaus** (remote), Technical University of Dresden  
*In the eye of the storm - A high resolution view at the details of the 3D magnetic texture of Skyrmion tubes*
- 14:30 **Juba Bouaziz** (remote), Forschungszentrum Jülich  
*Decoding of complex magnetic structures from Hall-effect measurements*
- 15:00 **Markus Weißenhofer** (remote), University of Konstanz  
*Thermally activated skyrmion dynamics in ferro- and synthetic antiferromagnets*
- 15:30 Coffee break
- 16:00 **Markus Garst** (onsite), Karlsruhe Institute for Technology  
*Microwave resonances of magnetic Skyrmions in thin film multilayers*
- 16:30 **Lena Wysocki** (onsite), University of Cologne  
*Tailoring the magnetic and magnetotransport properties of  $La_{0.67}Sr_{0.33}Mn_{1-y}Ru_yO_3$  thin films*
- 17:00 **Grace Causer** (onsite), Technical University of Munich  
*Exploring the phase diagram of thin film MnSi*
- 18:00 Dinner

## 15. October 2021

- 9:00        **Volodymyr Kravchuk** (onsite), Karlsruhe Institute for Technology  
*Curvature induced drift and deformation of magnetic Skyrmions*
- 9:30        **Sorn Sopheak** (onsite), Karlsruhe Institute for Technology  
*Impacts of Skyrmions on thermodynamic and optical properties of metallic magnets*
- 10:00        Coffee break
- 10:30        **Jonathan Kipp** (onsite), Forschungszentrum Jülich  
*The chiral Hall effect in ferromagnets and antiferromagnets*
- 11:00        **Robin Msiska** (onsite), University of Duisburg-Essen  
*Nonzero Skymion Hall Effect in topologically trivial structures*
- 11:30        Organizational matters & Farewell (*C. Pfeleiderer*)
- 12:00        Lunch (end of meeting)

## Poster

- **Nihad Abu Awwad** (remote), University of Duisburg-Essen  
*Charge density waves as enablers for chiral magnetism in two-dim. CrTe<sub>2</sub>*
- **Valentin Ahrens** (remote), Technical University of Munich  
*Tuning Skyrmions in thin CoFeB films with FIB irradiation*
- **Amal Aldarawsheh** (remote), Forschungszentrum Jülich  
*Four-sublattice antiferromagnetic skyrmions on a triangular lattice*
- **Aisha Aqeel** (onsite), Technical University of Munich  
*Magnetization dynamics of chiral magnetic insulators*
- **Carolina Burger** (remote), Technical University of Munich  
*Stability of the skyrmion lattice in Fe<sub>1-x</sub>Co<sub>x</sub>Si*
- **Takaaki Dohi** (remote), Universität Mainz  
*Thermally-activated skyrmion diffusion in ferro- and synthetic antiferromagnets*
- **Tim Drevelow** (remote), University of Kiel  
*Exchange and Dzyaloshinskii-Moriya interactions*
- **Lars Franke** (onsite), Karlsruhe Institute for Technology  
*Magnetoelastic surface states in chiral magnets*
- **Daniel Hauck** (onsite), Karlsruhe Institute for Technology  
*2  $\pi$  domain walls for tunable Majorana devices*
- **Rebeca Ibarra** (remote), MPI CPFS Dresden  
*Topological Hall effect in thin films of non-collinear magnets*
- **Vladyslav Kuchkin** (onsite), Forschungszentrum Jülich  
*Skyrmion dynamics*
- **Denis Mettus** (remote), Technical University of Munich  
**Alla Bezvershenko** (onsite), University of Cologne  
*Kinetic small-angle neutron scattering of skyrmion lattice order*
- **Andrii Savchenko** (onsite), Forschungszentrum Jülich  
*Standing spin waves in skyrmion lattice*