



## IMPRS Retreat (October 25-28, 2023)

### Wednesday, October 25

| Time        | Topic  | Room                  |
|-------------|--|-----------------------|
| 10:00-11:00 | Poster set-up and first scientific discussion  | Lektorium/<br>library |
| 11:00-12:00 | Welcome + introductory talks (organization committee, IMPRS)   | SR 1/2                |
| 12:00-13:00 | Lunch  | Cafeteria             |
| 13:00-13:45 | <b>Holger Meyerheim</b> - Nanostructures studied by x-ray diffraction  | SR 1/2                |
| 13:45-14:30 | <b>Erica Lilleodden</b> - Micromechanical methods as a diagnostics tool for everything from microelectronics to aviation | SR 1/2                |
| 14:30-15:00 | Coffee break   | SR 1/2                |
| 15:00-15:45 | <b>Wolfgang Binder</b> - Chirality of molecules and its transfer   | SR 1/2                |
| 15:45-16:30 | <b>Poster pitches</b>  | SR 1/2                |
| 16:30-18:00 | <b>Poster session</b>  | Lektorium/<br>library |
| 18:00-19:00 | Dinner   | Cafeteria             |
| From 19:00  | Informal get-together  | library               |

## Thursday, October 26

| Time        | Topic  | Room                  |
|-------------|--|-----------------------|
| 8:00-9:00   | Breakfast  | Cafeteria             |
| 9:00-9:45   | <b>Annika Johansson</b> - Theory of spin and orbital Edelstein effects   | SR 1/2                |
| 9:45-10:30  | <b>Georg Woltersdorf</b> - Magnetization dynamics from GHz to THz  | SR 1/2                |
| 10:30-11:15 | Coffee meeting with poster discussion  | Lektorium/<br>library |
| 11:15-12:00 | <b>Amir Capua</b> - Spin dynamics: from the orbital Hall effect to the generality of the LLG equation in the optical limit | SR 1/2                |
| 12:00-13:00 | Lunch  | Cafeteria             |
| 13:00-14:00 | Discussions at posters   | Lektorium/<br>library |
| 14:15       | Group Photo in courtyard of Leucorea   |                       |
| 14:30-15:30 | Guided tour Wittenberg (by IMPRS funding)  | Meet in<br>courtyard  |
| 16:00       | Brewery tour incl. beer tasting (30-60 min) (optionally, costs of 13 € on our own)   | Markt 6<br>06886 WB   |
| 17:30-18:00 | IMPRS-meeting in Brauhaus  | Markt 6<br>06886 WB   |
| 18:00-20:00 | Dinner in a local restaurant (1 main dish, 1 alcohol-free drink included): Brauhaus  | Markt 6<br>06886 WB   |
| 20:00-21:00 | Discussion at posters  | Lektorium/<br>library |



## Friday, October 27

| Time          | Topic   | Room                  |
|---------------|---|-----------------------|
| 8:00-9:00     | Breakfast   | Cafeteria             |
| 9:00-9:45     | <b>Jaechun Jeon</b> - Next generation Racetrack   | SR 1/2                |
| 9:45-10:30    | <b>Kai-Uwe Demasius</b> (IMPRS-alumnus) - Science versus Entrepreneurship: What Scientists Can Learn from Entrepreneurship and Vice Versa!  | SR 1/2                |
| 10:30-11:15   | Coffee meeting with posters   | Lektorium/<br>library |
| 11:15-12:00   | Election of IMPRS-students representatives + IMPRS program  | SR 1/2                |
| 12:00-13:00   | lunch   | Cafeteria             |
| 13:00-17:00   | Workshop "Cultivating Resilience and a Growth Mindset as a Physics PhD" by Dr. Emma Geoffray<br>The training blends together scientific research and practical techniques for cultivating resilience and embracing a growth mindset. It focuses on overcoming challenges, learning from failures, and maintaining a positive attitude throughout the physics PhD journey. | SR 1/2                |
| 17:00         | Conclusions + feedback  | SR 1/2                |
| 18:30         | Dinner  | Cafeteria             |
| 20:00 – 21:30 | Discussion at posters   | Lektorium/<br>library |



## Saturday, June 28

| Time        | Topic  | Room      |
|-------------|--|-----------|
| 8.00-9.30   | breakfast  | Cafeteria |
|             | Transfer to Ferropolis with S-Bahn (leaving Wittenberg at 10.03) and bus |           |
| 11.00/11.30 | Ferropolis guided tour (6-9 € for 60-90 min. tour)                       |           |
| 13.00       | Lunch in restaurant at Ferropolis  |           |
| 14.00-15.00 | Time to explore the area   |           |
|             | Go back to Halle together  |           |

## Venue

[Leucorea](#), Collegienstraße 62, 06886 Lutherstadt Wittenberg



**IMPRS**  
for Science and Technology of Nano-Systems  
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## Poster Session

**Ke Gu**, Binoy Krishna Hazra, Yicheng Guan, Peng Wang, Hakan Deniz, Stuart S. P. Parkin. *Racetrack memory devices based on freestanding multilayers*

**Lukas Fischer**, Rouven Dreyer, Jaechun Jeon, Georg Woltersdorf, Stuart Parkin. *Resonant Microwave Excitation of Magnetic Domain Walls*

**Anvesh Dixit**, Pranava K. Sivakumar, Stuart S. P. Parkin. *Detecting phase coherent channels in chiral topological metal*

**Matthias Rohmer**, Wolfgang H. Binder. *Photo-switchable helical chirality to modulate the CISS effect*

**Atul Pandey**, Srishti Dongare, Anagha Mathew, James M. Taylor, Stuart S. P. Parkin, and Georg Woltersdorf. *Opto-electrical magnetic domain imaging in non-collinear antiferromagnets*

**Yishen Xie**, Pranava Keerthi Sivakumar, Yufeng Wu, Stuart Parkin. *Molecular interclation induced chiral superconductivity*

**Björn Niedzielski**. *Magnon-Fluxon Interaction in Coupled Superconductor/Ferromagnet Hybrid Periodic Structures*

**Guanmin Li**, Zhong Wang, Jaechun Jeon, Yuliang Chen, Stuart Parkin. *Computational elements based on coupled VO<sub>2</sub> oscillators via tunable thermal triggering*

**Zhong Wang**, Guanmin Li, Ke Gu, Jaechun Jeon, Stuart Parkin. *Neuromorphic computing with VO<sub>2</sub> oscillatory neurons*

**Robin R. Neumann**, Alexander Mook, Jürgen Henk, and Ingrid Mertig. *Electrical Activity of Topological Chiral Edge Magnons*

**Yung-Cheng Li**, Jae-Chun Jeon, Stuart S. Parkin. *Interlayer Chiral Exchange: New Potential in Spintronic Application*

**Jiabao Yang**, Wei Yao, Pavel Dudin, Jose Avila, Stuart S. P. Parkin, Niels B. M. Schröter. *Giant Band Splitting in a Ferroelectric WSe<sub>2</sub>/WTe<sub>2</sub> Heterostructure*

**Mingqun Qi**, Peter Perlich, Stuart S. P. Parkin. *Emergent Ferromagnetism and Potential Spin Textures in the Nonmagnetic Metal CaRuO<sub>3</sub>*

**Yufeng Wu**, Pranava Keerthi Sivakumar, Yicheng Guan, Yan Zhang, Fan Li, Wenjie Zhang, Banabir Pal, and Stuart S. P. Parkin. *Long range supercurrent across 2D van der Waals antiferromagnet Josephson junctions*

**Jitul Deka**, Haojie Zhang, Stuart Parkin. *PtTe<sub>2</sub> for spintronics applications*



**Ismael Ribeiro de Assis**, Ingrid Mertig, Börge Göbel. *Skyrmion motion in magnetic anisotropy gradients*

**Zihan Yin**, Abhay Kant Srivastava, Ke Gu, Stuart Parkin. *Strain Effects on Néel-type Skyrmions in Novel Freestanding Heterostructures*

**Ivan Kandiak**, Swapna Sindhu Mishra, Andrea Migliorini, Banabir Pal, Jae-Chun Jeon, Stuart S.P. Parkin. *Magnetization detection in ferromagnetic Josephson junctions*

**E. C. McFarlane**, J. A. Krieger, A. Sanna, C. Pellegrini, M. Date, B. Pal, G. Domaine, S. S. P. Parkin, N. B. M. Schröter. *Superconductivity in type-II Dirac Semimetallic TMDSs PdTe<sub>2</sub> and NiTe<sub>2</sub>*



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