



## IMPRS Kick-Off (June 27+28, 2023)

### Tuesday, June 27

Time	Topic
13:45 – 14.00	Welcome and introduction (Stuart Parkin) <i>lecture hall (first floor)</i>
14.00 – 16.30	Poster session I with beer and pretzels <i>lounge (ground floor)</i>

### Wednesday, June 28

Time	Topic
13:30 – 16.00	Poster session II with beer and pretzels <i>lounge (ground floor)</i>
16:00 – 17:00	Internal PI meeting <i>immersive lab (second floor)</i>

### Venue

Max Planck Institute of Microstructure Physics, Weinberg 2, 06120 Halle (Saale)  
<https://www.mpi-halle.mpg.de/visitor-information>



## Poster session I (Tuesday, June 27)

**B. Rimmler**, I. Mertig, S. Parkin. *Anomalous Hall Effect and Spin Rotation in a Kagome Antiferromagnet*

**G. Li**, Z. Wang, J. Jeon, Y. Chen, S. Parkin. *Synchronized oscillators based on strong correlated vanadium oxide with thermal coupling abilities*

**M. Qi**, C. Fang, F. Li, P. Perlich, T. Chen, S. Parkin. *Emergent Ferromagnetism and Potential Spin Textures in the Nonmagnetic Metal  $\text{CaRuO}_3$*

**K. Gu**, B. K. Hazra, P. Wang, H. Deniz, S. Parkin. *Racetrack memory based on freestanding multilayer*

**Z. Yin**, A. Kant Srivastava, I. Kostanovskiy, K. Gu, S. Parkin. *Creating of Neel-type magnetic structures in  $\text{Fe}_3\text{GeTe}_2$  through symmetry broken*

M. O. Soldini, **F. Küster**, G. Wagner, S. Das, A. Aldarawsheh, R. Thomale, S. Lounis, S. Parkin, P. Sessi, T. Neupert. *Two-dimensional Shiba lattices as a possible platform for crystalline topological superconductivity*

**M. Date**, J. A. Krieger, E. C. McFarlane, V. Hasse, C. Felser, S. Parkin, M. Watson, N. Schröter. *Bulk and surface electronic structure of  $\text{Nb}_3\text{Br}_8$*

**L. Fischer**, R. Dreyer, J. Jeon, G. Woltersdorf, S. Parkin. *Resonant microwave excitation of magnetic domain walls*

**A. Pandey**, S. Dongare, A. Mathew, J. Taylor, S. Parkin, G. Woltersdorf. *Opto-electrical magnetic domain imaging in non-collinear antiferromagnets*

**K. Tiwari**, K. Xiao, K. Gu, A. Mathew, M. Marzouk, S. Parkin. *Near field light-matter interaction in strongly correlated materials*

**P. Rigvedi**, B. K. Hazra, B. Pal, J. Jeon, C. Luo, V. Ukleev, J. Taylor, F. Radu, S. Parkin. *Spin orbit torque switching in non-collinear antiferromagnets*

**Y. Wu**, T. Ma, W. Zhang, Y. Zhang, S. Parkin. *Controlled exfoliation of 2D materials and its application to Josephson Junctions*

**A. Chakraborty**, A. K. Srivastava, A. K. Sharma, B. Pal, P. K. Sivakumar, A. K. Gopi, H. Meyerheim, S. Parkin. *Skyrmions and Josephson diode effect in 2D materials*

**C. Körner**, G. Woltersdorf. *Tip-enhanced near field Brillouin light scattering*

**A. K. Gopi**, A. K. Srivastava, A. K. Sharma, A. Chakraborty, S. Das, H. Deniz, A. Ernst, B. K. Hazra, H. Meyerheim, S. Parkin. *Magnetic topological structures in a room temperature ferromagnetic 2D material*



## Poster session II (Wednesday, June 28)

**J. Yoon**, S.-H. Yang, J.-C. Jeon, A. Migliorini, I. Kostanovskiy, T. Ma, S. Parkin. *Local and global energy barriers for chiral domain walls in synthetic antiferromagnet-ferromagnet lateral junctions*

N. Li, **R. R. Neumann**, S. K. Guang, Q. Huang, J. Liu, K. Xia, X. Y. Yue, Y. Sun, Y. Y. Wang, Q. J. Li, Y. Jiang, J. Fang, Z. Jiang, X. Zhao, A. Mook, J. Henk, I. Mertig, H. D. Zhou, and X. F. Sun. *Thermal Hall effect of magnon polarons in a Heisenberg-Kitaev antiferromagnet*

**Y. Pordeli**, A. Migliorini, J.-C. Jeon, E. J.W. Berenschot, R. J. Hueting, H. J.G.E. Gardeniers, S.Parkin, N. R. Tas. *3D silicon nanomachining for electronic and magnetic nano-devices*

**Y. Xie**, P. K. Sivakumar, S. Parkin. *Molecular intercalation induced chiral superconductivity*

**T. Chen**, Y. Wu, P. Yu, S. Parkin. *Nonreciprocal anomalous Hall effect in a superconductor/multiferroic heterostructure*

**G. Domaine**, S. Terakawa, D. Pei, J. Yang, M. Date, I. Biało, J. D. Küspert, J. Chang, T. Kurosawa, N. Momono, M. Oda, M. Rosmus, N. Olszowska, A. Louat, C. Cacho, A. P. Schnyder, S. Parkin, N. Schröter. *Topological flat bands on the (110) surface of  $d_{x^2-y^2}$ -wave superconductors*

**M. Marzouk**, M. Tangi, S. Parkin. *Exotic functional properties emerge at the engineered heterostructures of oxide interfaces grown by molecular beam epitaxy*

**J.-R. Ji**, S. Das, F. Küster, P. Sessi, K. Chang, S. Barraza-Lopez, S. Parkin. *Molecular beam epitaxy growth of two-dimensional ferroelectric monolayers*

**A. Dixit**, P. K. Sivakumar, S. Parkin. *Phase coherent transport in chiral topological metals*

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

**P. Bassirian**, J. Yoon, M. Silinskas. *Unconventional superconductivity in P-doped EuFeAs thin films grown by MBE*

**Z. Wang**, G. Li, K. Gu, J. Jeon, S. Parkin. *Neuromorphic computing with VO<sub>2</sub> oscillatory neurons*

**J. Deka**, C. Fang, H. Zhang, S. Parkin. *PtTe<sub>2</sub> for spintronics applications*

**I. R. de Assis**, I. Mertig, B. Göbel. *Biskyrmion-based artificial neuron*

**I. Kindiak**, S. S. Mishra, A. Migliorini, J.-C. Jeon, P. Sivakumar, Y. Guan, S. Parkin. *Magnetization dynamics and spin-triplet Cooper pairs in ferromagnetic Josephson junctions*

**J. Yang**, W. Yao, P. Dudin, J. Avila, N. Schröter. *Giant Band Splitting in a Ferroelectric WSe<sub>2</sub>/WTe<sub>2</sub> Heterostructure*