

Agenda for Workshop on Real and Momentum Space Topology

July 24 – 26, 2025, University of Notre Dame

Venue: Jordan Hall of Science, 105

Thursday July 24, 2025

9:00 AM	Welcome	
	Session I	Chair: Collin Broholm
9:10 AM	Christian Pfleiderer	Topological nodal planes
9:55 AM	Morten Eskildsen	Collective skyrmion dynamics in response to a magnon current
10:40 AM	Coffee/Discussion	
11:00 AM	Shuolong Yang	The Triumphs and Surprises When Pushing 3D Topological Materials to 2D
11:45: AM	Rob Moore	Pushing the Boundaries of Topological Materials
12:30 PM	Lunch	
	Session II	Chair: Christian Pfleiderer
2:00 PM	Achim Rosch	Phase space Berry phases and magnetic textures
2:45 PM	Taylor Hughes	Topological Crystalline Response in Gapped and Gapless Systems
3:30 PM	Group Picture	
3:45 PM	Coffee	
4:00 PM	CD Pathak	Elucidating real-space topological spin textures in van der Waals ferromagnets using Lorentz transmission electron microscopy
4:45 PM	Fehmi Asin	Measuring nontrivial topological spin texture phenomena in real space
5:30 PM	Dinner	

Friday July 25, 2025

	Session III	Chair: David Mandrus
9:00 AM	Emilia Morosan	Real- and reciprocal-space topology in the square net Eu compounds: skyrmions, solitons and more
9:45 AM	Stefan Blugel	Interplay of Skyrmionic Properties and Electronic Structure: Mutual Influence and Emergent Phenomena
10:30 AM	Coffee/Discussion	
11:00 AM	Kai Liu	3D Magnetic Nanostructures and Effects of Curvature
11:45: AM	Satoru Nakatsuji	Topological Antiferromagnets for Microwave Spintronics
12:30 PM	Lunch	
2:00 PM	Ivar Martin	Condensed Matter Axions: Bridging Particle Physics, Quantum Materials, and Nonlinear Optics
2:45 PM	Coffee	
3:00 PM	Posters	
5:30 PM	Banquet Dinner	

Saturday July 26, 2025

	Session IV	Chair: Sang Wook Cheong
9: 00 AM	Shan Wu	Tunable magnetic and charge ordering in the resistivity-switchable antiferromagnet Fe_xNbS_2
9:45 AM	Linda Ye	Nonvolatile Nematic Order Manipulated by Strain and Magnetic Field in a Layered Antiferromagnet
10:30 AM	Coffee/Discussion	
11:00 AM	David Mandrus	Creating new THz Photodetectors with Topological Semimetals
11:45: AM	Alan Tennant	
12:30 PM	Lunch	
	Session V	Session Chair: Igor Mazin
2:00 PM	Liuyan Zhao	Nonlinear optical investigation of magnetism
2:45 PM	Kateryna Foyevtsova	Molecular orbitals and flat bands in 1D metallic quantum magnet Ti_4MnBi_2
3:30 PM	Coffee	
3:50 PM	Sang Wook Cheong	Altermagnetism for Experimentalists
4:35 PM	25 minutes talk to 2 best posters	
5:30 PM	Dinner	

