

## WORKSHOP #4

### Exploring Magnetic 2D Systems: Synergies across NSLS-II & CFN

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Recent improvements in 2D sample handling, characterization, and synthesis provide us with unprecedented opportunities of creating new advanced multifunctional materials. In parallel, the development of dedicated instruments boosted the research capabilities of the scientific community in revealing and investigating electronic phases in-situ and in-operando. The access to new exotic states has become possible, and their manipulation now offers the possibility of understanding collective electronic phenomena and the relationship between their degrees of freedom across relevant length-, time-, and energy-scales. In this perspective, magnetism represents an intriguing and rich playground for both fundamental challenges and advanced applications. To achieve these complex tasks, the synergy between CFN and NSLS-II is pivotal.

In this workshop, recent capabilities of creating and investigating 2D magnetic materials will be presented, spanning across natural realization of electronic confinement in bulk samples, and in dedicated engineered artificial structures. The focus will be put on the retrieval of their unconventional electronic properties, across space and time scales, setting the stage for an engaging discussion on future opportunities in the field, and development directions of our user facilities.

Start Time (ET)	Title	Speaker (Affiliation)
9:15	Welcome & Intro	
9:30	H. Zhang	ORNL
10:00	J. Musfeldt	UTK
10:30	Open Discussion	
11:00	M. Cuoco	CNR-SPIN, Italy
11:30	K. Plumb	Brown Univ.
12:00	Lunch	
12:30	Group Photo	
1:00	A. Rajapitamahuni / J. Pellicari	BNL
1:30	S. Kim / A. Barbour	BNL
2:00	L. Wehmeier / M.-G. Han	BNL
2:30	A. Al-Mahboob	BNL
2:45	Open discussion	
3:00	T. Hastings	Univ. of Kentucky
3:30	G. Grosso	CUNY
4:00	X. Roy	Columbia Univ.
4:30	Closing Remarks	