

# 2019 Princeton Summer School on Condensed Matter Physics

July 29 – August 1 – Princeton Center for Theoretical Science

Day 1	Monday, July 29	Day 3	Wednesday, July 31
8:30 – 9:15	<b>Breakfast</b>	8:30 – 9:30	<b>Breakfast</b>
9:15 – 9:30	Opening remarks	9:30 – 10:45	2D Magnets and Heterostructures <i>Xiaodong Xu, University of Washington</i>
9:30 – 10:45	Topological Insulator, Quantum Supermetal and Multi-Orbital Hubbard Physics in 2D Materials <i>Liang Fu, Massachusetts Institute of Technology</i>	10:45 – 11:00	<b>Coffee Break</b>
10:45 – 11:00	<b>Coffee Break</b>	11:00 – 12:15	From Dirac-Weyl fermions to Band Topology <i>Ashvin Vishwanath, Harvard University</i>
11:00 – 12:15	Tunable Mott insulator, superconductor, and Chern insulator in trilayer graphene/hBN moire superlattices <i>Feng Wang, University of California, Berkeley</i>	12:15 – 1:30	<b>Lunch</b>
12:15 – 1:30	<b>Lunch</b>	1:30 – 2:45	2D Magnets and Heterostructures <i>Xiaodong Xu, University of Washington</i>
1:30 – 2:45	Topological Insulator, Quantum Supermetal and Multi-Orbital Hubbard Physics in 2D Materials <i>Liang Fu, Massachusetts Institute of Technology</i>	2:45 – 3:00	<b>Coffee Break</b>
2:45 – 3:00	<b>Coffee Break</b>	3:00 – 4:15	From Dirac-Weyl fermions to Band Topology <i>Ashvin Vishwanath, Harvard University</i>
3:00 – 4:15	Moire excitons in transition metal dichalcogenide heterostructures <i>Feng Wang, University of California, Berkeley</i>		
Day 2	Tuesday, July 30	Day 4	Thursday, August 1
8:30 – 9:30	<b>Breakfast</b>	8:30 – 9:30	<b>Breakfast</b>
9:30 – 10:45	Topological Insulator, Quantum Supermetal and Multi-Orbital Hubbard Physics in 2D Materials <i>Liang Fu, Massachusetts Institute of Technology</i>	9:30 – 10:45	Applications to Magic Angle twisted bilayer graphene <i>Ashvin Vishwanath, Harvard University</i>
10:45 – 11:00	<b>Coffee Break</b>	10:45 – 11:00	<b>Coffee Break</b>
11:00 – 12:15	The Effects of Fragile Topology in Twisted Bilayer Graphene <i>Biao Lian, Princeton University</i>	11:00 – 12:15	Probing exotic phases of interacting 2D systems <i>Mansour Shayegan, Princeton University</i>
12:15 – 1:30	<b>Lunch</b>	12:15 1:30	<b>Lunch</b>
1:30 – 2:45	Quantization of heat flow in the fractional quantum Hall regime <i>Mitali Banerjee, Columbia University</i>	1:30 – 2:45	Evidence for edge supercurrent in the Weyl superconductor MoTe <sub>2</sub> <i>Nai Phuan Ong, Princeton University</i>
2:45 – 3:00	<b>Coffee Break</b>	3:00 – 5:00	Poster presentations and socials
3:00 – 4:15	Topological quantum transport in 2D crystals <i>Sanfeng Wu, Princeton University</i>		