Monday, Oct 17, 2016

Session (Theory Overview), Chair: Cenke Xu (UCSB)

8:50am Lars Bildsten (KITP) Welcome
9:00am T. Senthil (MIT) Topological, Gapless, and Critical Matter: More and the Same
9:45am Nathan Seiberg (IAS, Princeton) 2+1d duality
10:30am Morning Break

11:00am Duncan Haldane (Princeton) Quantum geometry and Composite Fermi liquid states in a partially filled Landau Level
11:45am Jason Alicea (Caltech) Milestones Toward Majorana-based Quantum Computing
12:30pm Lunch Break

Session (Topological Semimetals), Chair: Jason Alicea (Caltech)

2:00pm Dima Pesin (University of Utah) Chiral Magnetic Effect and Natural Optical Activity in Metals With or Without Weyl Points
2:45pm Elena Hassinger (Max Planck Institute) Fermi Surface Topology and Chirality in Weyl Semimetals
3:30pm Afternoon Break

4:00pm Nai Phuan Ong (Princeton) The Chiral Anomaly in the Dirac Semimetal Na3Bi and in the Half Heusler GdPtBi
4:45pm Jen Cano (Princeton) Beyond Weyl and Dirac Fermions
5:30pm SHUTTLE TO BWSCI

Tuesday, Oct 18, 2016

Session (Dualities and Half Filled Landau Level), Chair: Ashvin Vishwanath (Harvard)

9:00am Andrea Young (UCSB) Gapped and Gapless Phases of the Half-Filled Landau Level in Bilayer Graphene
9:45am Max Metlitski (Perimeter Institute) Particle-Vortex Duality of 2d Dirac Fermion from Electric-Magnetic
10:30am Morning Break

11:00am Chong Wang (Harvard) Revisiting composite fermi liquids
11:45am Lesik Motrunich (Caltech) Numerical studies of composite Fermi liquid at nu=1/2
12:30pm Lunch Break
Session (theory and experiments), Chair: Eun-Ah Kim (Cornell)

2:00pm Liang Fu (MIT) Fracton Topological Orders
2:45pm Jonathan Simon (U. of Chicago) Photonic Landau Levels in Curved Space
3:30pm Afternoon Break

4:00pm Leon Balents (KITP) TBD
4:45pm Hae-Young Kee (U. of Toronto) Topological Phases in Correlated Materials with Spin-Orbit Coupling

5:30pm RECEPTION

6:00pm SPECIAL EVENTS DINNER

8:00pm SHUTTLE TO BWSCI

Wednesday, Oct 19, 2016

Session (Theory), Chair: Xie Chen (Caltech)

9:00am Anton Kapustin (Caltech) Fermionic Phases of Matter and Spin Structures
9:45am Dan Freed (U. of Texas) Unitary Invertible Field Theories and Short-Range Entangled Phases

10:30am Morning Break

11:00am Fiona Burnell (U. of Minnesota) Topological Phases Enhanced by Global Anyon-Permuting Symmetries: Constructing Solvable Lattice Models
11:45am Maissam Barkeshli (U. of Maryland) Time Reversal and Reflection Symmetry in 2+1 Dimensional SETs

12:30pm Lunch Break

Session (Theory and Numerics), Chair: Donna Sheng (CSUN)

2:00pm Andreas Lauchli (University of Innsbruck) Spectroscopy of Conventional and Unconventional Quantum critical Points in 2+1D
2:45pm Nobert Schuch (Max Planck Institute) Tensor Network States for the Study of Strongly Correlated Quantum Systems

5:30pm SHUTTLE TO BWSCI

Thursday, Oct 20, 2016

Session (Theory), Chair: Fiona Burnell (U. of Minnesota)

9:00am Masaki Oshikawa (ISSP, U. of Tokyo) Polarization, Gauge Invariance, and Quantum Hall Effect on Lattice
9:45am Meng Cheng (Yale) Loop Braiding Statistics and (3+1)d Interacting SPT Phases of Fermions

10:30am Morning Break

11:00am Xie Chen (Caltech) Twisted Gauge Theories in 3D Walker-Wang Models
11:45am Michael Hermele (U. of Colorado Boulder) Topological Phases Protected by Point Group Symmetry
12:30pm Lunch Break

Session (Numerics)

2:00pm Yin Chen He (Harvard) Kagome Spin Liquid, Symmetry Protected Topological Phase and Deconfined Criticality
2:45pm Frank Verstraete (University of Vienna) Matrix Product Operator Representations of Tensor Fusion Categories

Afternoon Break

4:00pm Mike Zaletel (Princeton) TBD
4:45pm Donna Sheng (CSUN) Identifying and Characterizing Topological Sates by Entanglement Information using DMRG

5:30pm Reception

6:00pm Special Events Dinner

8:00pm Shuttle to BWSCI

Friday, Oct 21, 2016

Session (Theory)

9:00am Erez Berg (Weizmann Institute of Science) Beyond Parafermions: Statistics of Defects in Non-Abelian Phases
9:45am Andrew Potter (U. of Texas) Non-Equilibrium Topological Phases in Driven Quantum Systems

10:30am Morning Break

11:00am Chetan Nayak (Station Q) Time Crystal
11:45am Vedika Khemani (Harvard) Driven Phases of Quantum Matter
12:30pm Lunch Break

Session (Theory), Chair: Lukasz Fidkowski (Stony Brook)

2:00pm Yi-Zhuang You (Harvard) Bosonic Symmetry Protected Topological States: Theory, Numerics, and Experimental Platform
2:45pm Michael Levin (U. of Chicago) Detecting anomalies in 2D topological phases
3:30pm Conference Ends—Shuttle to BWSCI *Also available to SB Airport and SB Airbus, Goleta location (See Registration Desk to sign up.)