Monday, May 13, 2024

8:50am Mark Bowick (KITP)  Welcome[Video]
9:20am Yinchen He (Perimeter Inst.)  Deconfined phase transition under the fuzzy sphere microscope[Video][CC]
9:45am Shai Chester (Imperial College)  Monopoles, Duality, and Deconfined Quantum Tricriticality[Slides][Video][CC]
10:30am  Morning Break
11:00am Jonathan D'emidio (DIPC)  Entanglement entropy at deconfined and Gross-Neveu quantum critical point[Video][CC]
11:45am Anders Sandvik (BU)  SO(5) multicriticality in two-dimensional J-Q model[Slides][Video][CC]
12:30pm  Lunch Break

Spin liquids, Chair: Lucile Savary (ENS Lyon)

2:00pm Leon Balents (KITP)  Hunting spin liquids: checking out the terrain and identifying the tracks[Video][CC]
2:45pm Donna Sheng (CSUN)  Quantum spin liquid, and spin-liquid physics in doped t-J model[Slides][Video][CC]
3:30pm  Afternoon Break

Tuesday, May 14, 2024

9:00am Subir Sachdev (Harvard)  Universal theory for quantum phase transitions in two-dimensional metals with Harris disorder[Slides][Video][CC]
9:45am Chao Ming Jian (Cornell)  The conjugate composite Fermi liquid and descendant[Video][CC]
10:30am  Morning Break
11:00am Dominic Else (Perimeter Inst.)  Holographic models of metals[Slides][Video][CC]
11:45am Zhen Bi (Penn State)  Fermionic models with spontaneous dipolar symmetry breaking[Video][CC]
12:30pm  Lunch Break

Generalized symmetries, Chair: Zhu-Xi Luo (Harvard)

2:00pm Xiao-Gang Wen (MIT)  A 10-year journey: from non-invertible gravitational anomaly to generalized symmetry, and to a general theory of strongly correlated gapless states[Slides][Video][CC]
2:45pm Wenjie Ji (Caltech)  Excitations and defects in invertible phases[Slides][Video][CC]
3:30pm  Afternoon Break
4:00pm Carolyn Zhang (Harvard)  Protected gaplessness in a deformed ising model[Video][CC]
4:45pm Yi Zhong You (Northeastern)  Spontaneous Strong-to-Weak Symmetry Breaking[Video][CC]
5:30pm  RECEPTION
6:00pm  SPECIAL EVENTS DINNER
7:30pm  SHUTTLE TO BWSCI

Wednesday, May 15, 2024

9:00am Ashvin Vishwanath (Harvard)  Anomalous Hall Crystal: The quintessential quantum crystal and its potential relevance to rhombohedral graphene[Video][CC]
9:45am Long Ju (MIT)  Integer and Fractional Quantum Anomalous Hall Effects in Graphene[Slides][Video][CC]
10:30am  Morning Break
11:00am Jiaqi Cai (University of Washington)  Ferromagnetism and Topology of Higher Flat Band in twisted MoTe2[Embaraged]
11:45am Hart Goldman (U. Chicago)  Composite fermions and the fractional quantum anomalous Hall effect[Video][CC]
12:30pm  Lunch Break

2d quantum materials, Chair: Yi Ting Hsu (Notre Dame)

1:30pm Stephen Wilson (UCSB)  Unconventional dynamics in the quantum disordered antiferromagnet NaRuO2[Video][CC]
2:15pm Andrea Young (UCSB)  Anyons in van der Waals heterostructures[Video][CC]
3:00pm Chenhao Jin (UCSB)  Long lived isospin modes in gapless moire graphene[Video][CC]
3:30pm  Afternoon Break
4:00pm Xueyang Song (MIT)  Dirac spin liquid unnecessary quantum critical point on square lattice[Video][CC]
4:45pm Stevan Nadj Perge (Caltech) Orbit Proximitized Bernal Blayer Graphene [Video][CC] 
5:30pm RECEPTION 
6:00pm SPECIAL EVENTS DINNER 
7:30pm SHUTTLE TO BWSCI 

Thursday, May 16, 2024

Boundary Criticality & Symmetric mass generation, Chair: Cenke Xu (UCSB)

9:00am Max Metlitski (MIT) Boundaries and defects in the 3d O(N) mode [Video][CC]
9:45am Francesco Parisen Toldin (RWTH Aachen) Numerical studies of critical behavior in the presence of boundaries and defect [Video][CC]
10:30am Morning Break

11:00am Yi Zhuang You (UCSD) Fermi surface anomaly and symmetric mass generation [Video]
11:45am Pavel Volkov (UConn) Non-linear transport of strange metals [Video]
12:30pm Lunch Break

Non-Fermi liquids II, Chair: Aavishkar Patel (Flatiron)

2:00pm Zhengyan Darius Shi (MIT) Excitonic quantum criticality [Slides][Video][CC]
2:45pm Yi-Hsien Du (U. Chicago) Nonlinear bosonization of (Non-)Fermi Liquid [Video][CC]
3:30pm Natalia Chepiga (TU Delft) Tunable quantum criticality in multi-component Rydberg atoms [Slides][Video][CC]
4:15pm CONFERENCE END SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location (See Registration Desk BEFORE THURSDAY to sign up)