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 points [Video][CC]
11:45am Anders Sandvik (BU)
SO(5) multicriticality in two-dimensional J-Q model [Slides][Video][CC]
12:30pm
Lunch Break

Shuttle to BWSCI

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 descendants [Video][CC]
10:30am
Morning Break

11:00am Dominic Else (Perimeter Inst.)
Holographic models of metals [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 Zhi You (Northeastern)
Spontaneous Strong-to-Weak Symmetry Breaking [Video][CC]
5:30pm
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 [Embargoed]
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]
Thursday, May 16, 2024

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

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 defects [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)