

# Condensed Matter Theory Center FALL SYMPOSIUM



Date: December 7, 2016; 11:00AM-5:30PM  
December 9, 2016; 11:00AM-3:00PM  
Location: 2205 Toll Physics Building

## December 7 (Wednesday)

### Spin Quantum Computation

- 11:00 AM Robert Throckmorton, "Quantum fidelity in electron spin-based semiconductor two-qubit exchange gates"
- 11:45 AM Yang Song, "Validity of the rotating-wave approximation in semiconductor qubit systems and fast gate control beyond the RWA"
- 12:30 Break

### Weyl Semimetals and Topological Insulators

- 1:30 PM Pallab Goswami, "Non-Fermi liquid phases of topological semimetals"
- 2:15 PM Mehdi Kargarian, "Amperean and time-reversal-symmetry-breaking superconducting states in spin-orbit coupled electron systems"
- 3:00 PM Jed Pixley, "Avoided quantum criticality and single particle excitations in weakly disordered Weyl semimetals"
- 3:45 Break

### Many Body Localization

- 4:00 PM Yang-Le Wu, "Understanding analog quantum simulation dynamics in coupled ion-trap qubits"
- 4:45PM Xiao Li, "Exploring non-ergodicity with atoms in an incommensurate optical super-lattice"

## December 9 (Friday)

### Majorana Fermions

- 11:00 AM Setiawan, "Conductance spectroscopy of nontopological--topological superconductor junctions"
- 11:45 AM Chunxiao Liu, "Realistic simulations of Majorana nanowire systems"
- 12:30 Break

### Parafermions & Spin Liquids

- 1:30 PM Yahya Alavirad, " $Z_3$  parafermions without superconducting backscattering from the  $2/3$  fractional quantum Hall state"
- 2:15 PM Junhyun Lee, "Electronic quasiparticles in the quantum dimer model: Density matrix renormalization group results"