



Condensed Matter Theory Center Fall 2009 Symposium

September 28 - October 2, 2009

2202 Physics Building

10:00AM – 12:00PM

<http://www.physics.umd.edu/cmtc/seminars.html>

September 28, 2009 10:00 AM–12:00 PM COLD ATOMS

Bin Wang, "**Quantum phase diagram of fermion mixtures in 1D optical lattices**"

Ryan Barnett, "**Vortex lattice locking in rotating BECs and spinor condensates**"

Maxim Dzero, "**Cooper pair turbulence in atomic traps**"

Rajdeep Sensarma, "**Measuring many body correlations in cold-atom systems with optical lattice modulations**"

September 29, 2009 10:00 AM–12:00 PM GRAPHENE & QPT

Qiuzi Li, "**Temperature dependence of compressibility in 2D system**"

Enrico Rossi, "**Signatures of Klein tunneling in disordered graphene p-n-p junctions**"

Euyheon Hwang, "**Screening in graphene and its consequences**"

Roman Lutchyn, "**Dissipation-driven quantum phase transition in super-conductor-graphene systems**"

September 30, 2009 10:00 AM–12:00 PM TOPOLOGICAL AND FQHE

Mike Peterson, "**Quantum Hall phase diagram of second Landau-level half-filled bilayers: Abelian versus non-Abelian states**"

Kai Sun, "**Topological phases of dipolar particles in elongated Wannier orbitals**"

Meng Cheng, "**Topological superconducting phases in two-dimensional fermion models**"

Jay Sau, "**Possibility of observing the physics of Majorana Fermions in semiconductor-superconductor heterostructures**"

October 1, 2009 10:00 AM–12:00 PM COLD ATOMS & LOCALIZATION

John Biddle, "**Localization in 1-D incommensurate potentials**"

Jason Kestner, "**Effective single-band Hamiltonians for fermions in an optical lattice near a Feshbach resonance**"

Qi Zhou, "**Cooling and detecting schemes in optical lattices**"

Sankar Das Sarma, "**Localization versus percolation as a metal-insulator transition**"

October 2, 2009 10:00 AM–12:00 PM SPIN PHYSICS & PHASE TRANSITIONS

Stephen Powell, "**Unconventional classical phase transitions**"

Dimi Culcer, "**Spin qubits in multivalley Si quantum dots**"

Victor Galitski, "**Topological phases in cold atom systems**"

Victor Yakovenko, "**Theories of the time-reversal symmetry breaking and the Kerr effect in Sr_2RuO_4 and underdoped cuprates**"