

**2008 Boulder Summer School
Strongly Correlated Materials
June 30 – July 18, 2008
Schedule**

Week 1: June 30 – July 4, Location: JILA Auditorium

Monday, June 30	
9:00 - 10:30 AM	RG for Fermions, Part I (Shankar)
10:30 - 11:00	Break
11:00 - 12:30	NMR, Part I (Mitrovic)
2:30 - 4:00 PM	One-dimensional Quantum Physics (Le Hur)
Tuesday, July 1	
9:00 - 10:30 AM	Cold Atoms Theory, Part I (Radzihovsky)
10:30 - 11:00	Break
11:00 - 12:30	Cold Atoms Experiments, Part I (D. Jin)
2:30 - 4:00 PM	Dimensional Crossovers, Exotic SC, and Challenges in 2D (Le Hur)
Wednesday, July 2	
9:00 - 10:30 AM	RG for Fermions, Part II (Shankar)
10:30 - 11:00	Break
11:00 - 12:30	Microscopic Theory of Transition Metal Systems, Part I (Mostovoy)
2:30 - 4:00 PM	Low-dimensional Dirac Fermions: Carbon Nanotubes and Graphene (Le Hur)
Thursday, July 3	
9:00 - 10:30 AM	Organics, Part I (Bourbonnais)
10:30 - 11:00	Break
11:00 - 12:30	Cold Atoms Experiments, Part II (D. Jin)
7:00 - 10:00 PM	Poster Sessions I (11 th Floor Gamow Tower)
Friday, July 4	
9:00 - 10:30 AM	Organics, Part II (Bourbonnais)
10:30 - 11:00	Break
11:00 - 12:30	NMR, Part II (Mitrovic)
2:30 - 4:00	Microscopic Theory of Transition Metal Systems, Part II (Mostovoy)
5:00 - 6:30 PM	Kittredge Pond BBQ

Organizers: Alan, Ashvin

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Week 2: July 7 – July 11, Location: JILA Auditorium

Monday, July 7	
9:00 - 10:30 AM	RG for Fermions, Part III (Shankar)
10:30 - 11:00	Break
11:00 - 12:30	Quasiparticle charge and heat transport in d-wave superconductors (Ong)
2:30 - 4:00 PM	Frustrated Magnetism, Part I (Balents)
Tuesday, July 8	
9:00 - 10:30 AM	Heavy Fermions and Local Moments: Heavy Fermions and Landau Fermi Liquid Theory (Coleman)
10:30 - 11:00	Break
11:00 - 12:30	Frustrated Magnetism, Part II (Balents)
2:30 - 4:00	Exotic Phases and Unconventional Quantum Criticality, Part I (Senthil)
5:00 - 8:00 PM	Flagstaff Mountain Cookout
Wednesday, July 9	
9:00 - 10:30 AM	Heavy Fermions and Local Moments: Local Moments and the Kondo Effect (Coleman)
10:30 - 11:00	Break
11:00 - 12:30	The Nernst effect in vortex liquid state (Ong)
7:00 - 8:30 PM	Public Lecture (R. Shankar) – Duane G1B20 “When You Come to a Fork in the Road Take It: Yogi Berra’s Guide to the Quantum World”
Thursday, July 10	
9:00 - 10:30 AM	Heavy Fermions and Local Moments: Mean Field Theory for the Kondo Lattice (Coleman)
10:30 - 11:00	Break
11:00 - 12:30	Exotic Phases and Unconventional Quantum Criticality, Part II (Senthil)
2:30 - 4:00	Magnetization experiments in cuprates (Ong)
7:00 - 10:00 PM	Poster Sessions II (11 th Floor Gamow Tower)
Friday, July 11	
9:00 - 10:30 AM	Frustrated Magnetism, Part III (Balents)
10:30 - 11:00	Break
11:00 - 12:30	Exotic Phases and Unconventional Quantum Criticality, Part III (Senthil)
2:30 - 4:00	‘Optical’ Spectroscopies of Correlated Systems: Formalism and Techniques (Armitage)
5:00 - 6:30 PM	Kittredge Pond BBQ

Organizers: Alan, Ashvin, Piers, Collin

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Week 3: July 14 – July 18, Location: JILA Auditorium

Monday, July 14	
9:00 - 10:30 AM	'Optical' Spectroscopies of Correlated Systems: Examples and Advanced Analysis (Armitage)
10:30 - 11:00	Break
11:00 - 12:30	Neutron and X-ray Spectroscopies of Correlated Systems: Formalism and Techniques (Keimer)
2:30 - 4:00 PM	Photoemission, Part I (Dessau)
Tuesday, July 15	
9:00 - 10:30 AM	Oxide Heterostructures Theory, Part I (Millis)
10:30 - 11:00	Break
11:00 - 12:30	Iron Arsenic Based Superconductors (Canfield)
7:00 - 10:00 PM	Poster Sessions III (11 th Floor Gamow Tower)
Wednesday, July 16	
9:00 - 10:30 AM	Oxide Heterostructures Theory, Part II (Millis)
10:30 - 11:00	Break
11:00 - 12:30	Neutron and X-ray Spectroscopies of Correlated Systems: Examples (Keimer)
2:30 - 4:00 PM	Mean Field Theories of Electronic Structure of Correlated Electron Systems: from DFT to DMFT, Part I (Kotliar)
Thursday, July 17	
9:00 - 10:30 AM	Oxide Heterostructures Theory, Part III (Millis)
10:30 - 11:00	Break
11:00 - 12:30	The 17 Position Knob (Canfield)
2:30 - 4:00 PM	STM, Part I (Yazdani)
Friday, July 18	
9:00 - 10:30 AM	Mean Field Theories of Electronic Structure of Correlated Electron Systems: from DFT to DMFT, Part II (Kotliar)
10:30 - 11:00	Break
11:00 - 12:30	An Experimentalists Guide to Superconductivity (Canfield)
2:30 - 4:00	STM, Part II (Yazdani)
5:00 - 6:30 PM	Kittredge Pond BBQ

Organizers: Alan, Piers, Collin