Spins and Interactions in Mesoscopic Systems

May 10-12, 2002

University of Minnesota, 200 Union Street, Minneapolis, Minnesota 55455

Friday, May 10 – Room 3-180 Electrical Engineering/Computer Science Building

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8:15 – 9:00	Registration – Room 3-176
9:00 – 9:05	Welcome and Opening Remarks Allen Goldman, University of Minnesota
Session 1:	Chair: Leonid Glazman, University of Minnesota
	SPINTRONICS
9:05 - 9:40	Allan MacDonald, University of Texas, Austin Spintronics in Quantum Hall Ferromagnets
9:40 - 10:15	David Awschalom, University of California - Santa Barbara Manipulating Quantum Information with Semiconductor Spintronics
10:15 - 10:50	Sankar Das Sarma, University of Maryland Spin Electronics and Spin Computation
10:50 - 11:35	Coffee Break
	ITINERANT MAGNETISM
11:35 - 12:10	Andy Millis, Columbia University Spin droplets in nearly magnetic metals
12:10 - 12:45	Michael Reznikov, Technion Thermodynamic Magnetization of Electrons in a Silicon Inversion Layer
12:45 - 3:00	Lunch

Session 2:	Chair: Alex Kamenev, University of Minnesota
	SPINS IN MESOSCOPIC METALS AND JUNCTIONS
3:00 - 3:35	Dan Ralph, Cornell University Spin-dependent tunneling via quantum states in nanoparticles and single molecules
3:35 - 4:10	Fumihiro Matsukura, Tokyo University Novel properties of III-V ferromagnetic semiconductor heterostructures
4:10 - 4:40	Coffee Break
4:40 - 5:15	Alexander Efros, Naval Research Laboratory Theory of Electron g-Factor Engineering in Semiconductor Heterostructures
5:15 - 5:50	Nitin Samarth, Penn State University Spin Transport and Tunneling in Hybrid Ferromagnet/Semiconductor Heterostructures

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Saturday, May 11 – Room 3-180 Electrical Engineering/Computer Science Building

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Session 3:	Chair: David Goldhaber-Gordon, Stanford University
	SPIN AND CHARGE IN QUANTUM DOTS AND QUANTUM WIRES
9:00 - 9:35	Seigo Tarucha, University of Tokyo Interactions and spin effects in coupled quantum dot structures
9:35 - 10:10	Michael Pustilnik, University of Minnesota Kondo effect in real quantum dots
10:10 - 10:45	Leo Kouwenhoven, Technical University Delft Electrons in Double Quantum Dots
10:45 - 11:30	Coffee Break
11:30 - 12:05	Ian Affleck, Boston University Observing the Kondo screening cloud around quantum dots
12:05 - 12:40	Claudio Chamon, Boston University Adiabatic spin transport through interacting quantum wires and quantum dots
12:40 - 3:00	Lunch

Session 4:	Chair: Felix von Oppen, Berlin University
	SPIN AND CHARGE IN QUANTUM DOTS AND QUANTUM WIRES (continued)
3:00 - 3:35	Piet Brouwer, Cornell University Enhanced mesoscopic fluctuations in the crossover between random matrix ensembles
3:35 - 4:10	Charles Marcus, Harvard University Spin, Coherence, and Spin-Orbit Interaction in Clean 2,1, and 0 Dimensional Systems
4:10 - 4:40	Coffee Break
4:40 - 5:15	Bertrand Halperin, Harvard University Finite-size effects and spin-charge separation in tunneling between parallel quantum wires
5:15 - 5:50	Alexei Tsvelik, Brookhaven National Laboratory Single electron Green's function for 1D Charge Density Wave state

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Sunday, May 12 – Room 3-180 Electrical Engineering/Computer Science Building

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Session 5:	Chair: Eugene Demler, Harvard University
	ELECTRON AND SPIN QUANTUM DYNAMICS
9:00 - 9:35	Myriam Sarachik, City Collete, CUNY Spin Tunneling in a Molecular Magnet
9:35 - 10:10	Subir Sachdev, Yale Mott insulators in strong electric fields
10:10 - 10:40	Coffee Break
10:40 - 11:15	Hugues Pothier, CEA-Saclay Magnetic Field dependent Electron-Electron Interactions in Metallic Wires
11:15 - 11:50	Mikhail Raikh, University of Utah Spin-Orbit-Induced Satellites of a Zero-Bias Anomaly