

CONFERENCE AGENDA

International School and Conference on Spintronics and Quantum Information Technology
(SPINTECH IV)

Sunday, 17 June, 2007

1700 – 2100 *Registration for School and Conference at the
Registration Desk*

Monday, 18 June, 2007

0730 – 0845 *Registration for School and Conference at the
Registration Desk*

0845 – 0900 **Spintech IV Opening**

0900 – 1000 Stephan von Molnar, Florida State University
Introduction to Magnetic Semiconductors

1000 – 1015 ***Short Break***

1015 – 1115 Michael Flatté, University of Iowa
Spin Coherence in Semiconductors (I)

1115 – 1130 ***Short Break***

1130 – 1230 Michael Flatté, University of Iowa
Spin Coherence in Semiconductors (II)

1230 – 1430 ***Lunch***

1430 – 1530 Paul Crowell, University of Minnesota
Spin Injection and Control in Semiconductors (I)

1530 – 1545 ***Short Break***

1545 – 1645 Paul Crowell, University of Minnesota
Spin Injection and Control in Semiconductors (II)

1645 – 1700 ***Short Break***

1700 – 1800 Hans-Andreas Engel, Harvard University
Electrical Spin Generation and the Spin Hall Effect

1800 – 1900 ***Break***

1900 – 2100 ***Welcome Reception, Pacific Terrace***

Tuesday, 19 June, 2007

0900 – 1000	Junsaku Nitta, Tohoku University <i>Spin Transport in Semiconductors</i>
1000 – 1015	Short Break
1015 – 1115	Nitin Samarth, Pennsylvania State University <i>Ferromagnetic Semiconductors (I)</i>
1115 – 1130	Short Break
1130 – 1230	Nitin Samarth, Pennsylvania State University, <i>Ferromagnetic Semiconductors (II)</i>
1230 – 1430	Lunch
1430 – 1530	Paul Koenraad, Eindhoven University, <i>Scanning Probe Microscopy</i>
1530 – 1545	Short Break
1545 – 1645	Robert Buhrman, Cornell University <i>Metal-Based Spintronics</i>
1645 – 1700	Short Break
1700 – 1800	Lieven Vandersypen, Delft University <i>Spin-Based Quantum Computing in Nanostructures</i>
1800 – 2000	Evening Break
2000 – 2100	Rump Session

Wednesday, 20 June, 2007

0900 – 1000	Wilfred van der Wiel, University of Twente <i>Organic Spintronics</i>
1000 – 1015	Short Break
1015 – 1115	Olle Heinonen, Seagate Technology <i>Industrial Developments in Spintronics</i>
	Patrick McCray, University of California Santa Barbara <i>Historical Development of Spintronics</i>
1115 – 1130	Short Break
1130 – 1230	Tomasz Dietl, Warsaw University <i>New Directions and Opportunities</i>
1230	School Adjourns

SPINTECH IV CONFERENCE

- 1415 – 1430 **Spintech IV Conference Opening**
- 1430 – 1515 Hideo Ohno, Tohoku University (INV-1)
Spin-Current Induced Dynamics in Ferromagnetic Semiconductor Structures
- 1515 – 1600 Daniel Ralph, Cornell University (INV-2)
Manipulating Nanomagnets Using Spin-Transfer Torques
- 1600 – 1615 **Break**
- 1615 – 1630 Emmanuel Rashba, Harvard University (O-1)
Out-of-Plane Spin Polarization from In-Plane Electric and Magnetic Fields
- 1630 – 1645 Yara Galvao Gobato, University Federal of Sao Carlos (O-2)
Evidence of Spin Polarized Two-Dimensional Electron Gas in P-I-N Resonant Tunneling Diodes
- 1645 – 1700 Giovanni Vignale, University of Missouri (O-3)
Gilbert Damping and Spin Coulomb Drag in a Magnetized Electron Liquid with Spin-Orbit Interaction
- 1700 – 1745 Daniel Loss, University of Basel (INV-3)
Spin Resonance and Spin Currents in Disordered 2DEGs with Spin-Orbit Interactions
- 1745 – 1800 **Break**
- 1800 – 1930 Poster Session I (P1 – P60)

Thursday, 21 June, 2007

- 0900 – 0945 Philip Kim, Columbia University (INV-4)
Graphene: A New 2-Dimensional System for Electronic and Spintronic Applications
- 0945 – 1000 Guido Burkard, University of Basel (O-4)
Spin Qubits in Graphene Quantum Dots
- 1000 – 1015 Jesse Berezovsky, UCSB (O-5)
Non-Destructive Optical Measurements of a Single Electron Spin in a Quantum Dot
- 1015 – 1030 Takaaki Koga, Hokkaido University (O-6)
Spin Interference Effect in a Triangular Loop Array Using (001)In_{0.53}Ga_{0.47}As/In_{0.52}Al_{0.48}As Quantum Wells
- 1030 – 1045 Pascal Simon, University of Basel (O-7)
Electronic Spin Precession and Interferometry from Spin-Orbital Entanglement in a Double Quantum Dot

1045 – 1100	Break
1100 – 1145	Ron Jansen, University of Twente (INV-5) <i>Tunable Spin Tunnel Contacts for Spin-Injection into Si</i>
1145 – 1200	Ian Appelbaum, University of Delaware (O-8) <i>Electronic Measurement and Control of Spin Transport in Silicon</i>
1200 – 1215	Daniel Neumaier, University of Regensburg (O-9) <i>Quantum Interference and Weak Localization in 1D Ferromagnetic (Ga,Mn)As</i>
1215 – 1230	Bastiaan Bergman, IBM Almaden Research Center (O-10) <i>Pump-Probe Magneto-Optical Kerr Measurements of Domain-Wall Dynamics in Magnetic Nanowires</i>
1230	Official Photo, Mei Court
1230 – 1430	Lunch
1430 – 1515	Ali Yazdani, Princeton University (INV-6) <i>Atom-by-Atom Substitution of Single Spin Impurities in GaAs and Visualization of their Interactions</i>
1515 – 1600	Dimitri Basov, UCSD (INV-7) <i>Impurity Band Conduction in the High Temperature Ferromagnetic $Ga_{1-x}Mn_xAs$</i>
1600 – 1615	Break
1615 – 1630	Kazunori Sato, Osaka University (O-11) <i>Spinodal Decomposition and Super-Paramagnetism in Dilute Magnetic Semiconductors</i>
1630 – 1645	Yan Li, UCR (O-12) <i>Tuning of Ferromagnetic Proximity Polarization in GaAs by MgO Interlayers</i>
1645 – 1700	Scott Crooker, Los Alamos National Laboratory (O-13) <i>Tuning the Sign and Sensitivity of Fe/GaAs Electrical Spin Detectors</i>
1700 – 1745	Jonathan Finley, Walter Schottky Institute (INV-8) <i>Optically Probing Charge and Spin Interactions in an Electrically Tunable Quantum Dot Molecule</i>
1745 – 1800	Break
1800 – 1930	Poster Session II (P61 – P111)
1930 – 2100	Banquet Luau, Pacific Terrace

Friday, 22 June, 2007

- 0900 – 0945 Ronald Hanson, University of California Santa Barbara (INV-9)
Manipulating and Coupling Single Spins in Diamond at Room Temperature
- 0945 – 1000 Masaaki Ono, Tohoku University (O-14)
Optical Detection of Nuclear Spin Coherent Oscillations in a GaAs Quantum Well
- 1000 – 1015 Gregory Fuchs, Cornell (O-15)
Low-Field Ferromagnetic Resonance Studies of Spin-torque Driven Excitations in Magnetic Nanopillars
- 1015 – 1030 Katrin Pappert, Wuerzburg University (O-16)
A Non-Volatile Memory Device - Exploiting Locally Imposed Anisotropies in (Ga,Mn)As
- 1030 – 1045 Niko Tombros, University of Groningen (O-17)
Electronic Spin Transport and Spin Precession in Single Graphene Layers at Room Temperature
- 1045 – 1100 ***Break***
- 1100 – 1145 Amir Yacoby, Harvard University (INV-10)
Control and Manipulation of Two Electron Spins in GaAs Quantum Dots
- 1145 – 1230 Seigo Tarucha, University of Tokyo (INV-11)
Electrical and Magnetic Control of Dynamical Nuclear Spin Polarization in Quantum Dots
- 1230 - 1245 **Spintech IV Closing Remarks**