SPINTECH VII

Sunday, 28 July 2013

1600 – 1900  Registration: InterContinental Chicago Hotel Lobby

Monday, 29 July 2013

0730 – 0845  Continental Breakfast: Empire Ballroom

0745 – 0845  Registration: Outside Grand Ballroom

0845 – 0900  Spintech VII School Opening: Grand Ballroom

0900 – 1030  Hideo Ohno, Tohoku University (L-1)
Introduction to Spintronics for Integrated Circuit Applications

1030 – 1100  Break

1100 – 1230  Joseph Heremans, Ohio State University (L-2)
The Spin Seebeck Effect: an Experimentalist’s Point of View

1230 – 1430  Lunch: Empire Ballroom

1430 – 1600  Peter Schiffer, University of Illinois at Urbana-Champaign (L-3)
Nanomagnetism and Artificial Spin Ice

1600 – 1630  Break

1630 – 1800  Jonathan Lang, Argonne National Laboratory (L-4)
Probing Elemental Magnetism Using Synchrotron Radiation

1800 – 1830  Break

1830 – 2030  Welcome Reception: King Arthur Court
Tuesday, 30 July 2013

0800 – 0900  Continental Breakfast: Empire Ballroom

0900 – 1030  Ezekiel Johnston-Halperin, Ohio State University (L-5)  
Foundations of Active Organic Spintronics

1030 – 1100  Break

1100 – 1230  Giovanni Vignale, University of Missouri (L-6)  
Spin Hall Effect and Spin Hall Drag in Semiconductors

1230 – 1430  Lunch: Empire Ballroom

1430 – 1600  Lily Childress, McGill University (L-7)  
Nitrogen Vacancy Centers in Diamond

1600 – 1630  Break

1630 – 1800  Guido Burkard, Universität Konstanz (L-8)  
Spin Qubits in Graphene and Carbon Nanotubes

1800 – 1830  Panel discussion with journal editors (students only)

Wednesday, 31 July 2013

0800 – 0900  Continental Breakfast: Empire Ballroom

0900 – 1030  David Vanderbilt, Rutgers University (L-9)  
Berry Phases and Curvatures in Computational Electronic Structure Theory

1030 – 1100  Break

1100 – 1230  Raymond Beausoleil, HP Laboratories (L-10)  
Large-Scale Integrated Photonics for 21st-Century Information Technologies

1230  School Adjourns
### Wednesday, 31 July 2013 (cont.)

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<td><strong>Spintech VII Conference Opening</strong>: Grand Ballroom</td>
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<tr>
<td>1430 – 1530</td>
<td>Dan Ralph, Cornell University (INV-1)</td>
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<td><em>Manipulating Magnetic Devices Using Spin Transfer Torque from the Giant Spin Hall Effect</em></td>
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<td>1530 – 1630</td>
<td>Eiji Saitoh, Tohoku University (INV-2)</td>
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<td><em>Spin Pumping and Spin Seebeck Effects</em></td>
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<td>1630 – 1645</td>
<td><strong>Break</strong></td>
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<td>1645 – 1700</td>
<td>Florent Perez, Université Pierre et Marie Curie / CNRS (O-1)</td>
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<td><em>Terahertz Radiation from Spin Waves in Diluted Magnetic Semiconductors</em></td>
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<td>1700 – 1715</td>
<td>Lin Chen, Tohoku University (O-2)</td>
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<td><em>DC Voltages in (Ga,Mn)As and its Adjacent p-GaAs under Ferromagnetic Resonance</em></td>
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<td>1715 – 1730</td>
<td>Florent Baboux, Institut des NanoSciences de Paris (O-3)</td>
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<td><em>Giant Spin-Orbit Effects on Collective Spin Excitations</em></td>
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<td>1730 – 1830</td>
<td>Paul Koenraad, Eindhoven Technical University (INV-3)</td>
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<td><em>Investigation and Manipulation of Individual Transition-Metal Impurities in GaAs</em></td>
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<td>1830 – 1845</td>
<td><strong>Break</strong></td>
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<td>1845 – 2030</td>
<td><strong>Reception and Poster Session 1</strong>: Renaissance Ballroom</td>
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Thursday, 1 August 2013

0800 – 0900  Continental Breakfast: Empire Ballroom

0900 – 1000  Andrew Dzurak, University of New South Wales (INV-4)
  Single-Atom Spin Qubits in Silicon

1000 – 1015  John Morton, University College London (O-4)
  Atomic Clock Transitions in Silicon-Based Spin Qubits

1015 – 1030  Kamyar Saeedi Ilkhchyy, Simon Fraser University (O-5)
  Ionized 31P Nuclear Spins in 28Si Show Coherence Times Exceeding Thirty Minutes at Room Temperature

1030 – 1045  Martino Poggio, Universität Basel (O-6)
  Harnessing Nuclear Spin Polarization Fluctuations in a Semiconductor Nanowire

1045 – 1100  Makoto Kohda, Tohoku University (O-7)
  Evidence of Dynamic Nuclear Spin Polarization due to Stern-Gerlach Spin Separation in an InGaAs Quantum Point Contact

1100 – 1115  Break

1115 – 1215  Daniel Loss, Universität Basel (INV-5)
  Long-Range Interaction between Spin-Qubits via Ferromagnets

1215 – 1230  Wolfgang Pfaff, Kavli Institute of Nanoscience Delft (O-8)
  Quantum Networks with Spins in Diamond

1230 – 1245  Viktor Ivády, Linköping University (O-9)
  Ab initio Investigation of Divacancy Spins in SiC Polytypes

1245 – 1300  Hideo Kosaka, Tohoku University (O-10)
  Process Tomography of Coherent State Transfer from Light Polarization to Electron Spin Polarization in a Semiconductor

1300 – 1400  Lunch: Empire Ballroom

1400 – 1500  Dan Rugar, IBM Almaden Research Center (INV-6)
  Nanoscale Nuclear Magnetic Resonance Imaging: Progress and Challenges
Thursday, 1 August 2013 (cont.)

1500 – 1600  Amir Yacoby, Harvard University (INV-7)
  *Entanglement of Coupled Singlet Triplet Spin Qubits*

1600 – 1700  Jörg Wrachtrup, Universität Stuttgart (INV-8)
  *Quantum Enhanced Precision Measurements Using Single Spins*

1700 – 1715  **Official Conference Photo: Location TBD**

1715 – 1900  **Poster Session 2: Renaissance Ballroom**

1900 – 1930  Shuttles provided to Field Museum for Banquet
             Front entrance to InterContinental Chicago Hotel

1930 – 2200  **Banquet at Field Museum**

Friday, 2 August 2013

0800 – 0900  **Continental Breakfast: Empire Ballroom**

0900 – 1000  Zhi-Xun Shen, Stanford University (INV-9)
  *Microwave Microscopy Imaging of Topological Structures in Quantum Materials*

1000 – 1100  Mark Freeman, University of Alberta (INV-10)
  *Quantitative Magneto-Mechanical Detection and Control of the Barkhausen Effect*

1100 – 1115  **Break**

1115 – 1130  David Christle, University of Chicago (O-11)
  *Measurement and Control of Single Spins in Diamond above 600 K*

1130 – 1230  Xiaodong Xu, University of Washington (INV-11)
  *Optical Manipulation and Electrical Control of Spins and Valleys in Atomically-Thin Semiconductors*

1230 – 1245  **Spintech VII Closing Remarks**