

**Program of The 1st International Workshop on Frontiers in Quantum Optics
and Quantum Information: *Quantum Computing with Electron Spin Qubits***

Wednesday, July 2, 2014	
15:00 – 22:00	Registration Lobby of RZJY Hotel, No. 3 He-Qing Road, Beijing
Thursday, July 3, 2014	
08:30 – 18:00	Registration Conference Room 11, RZJY Hotel, No. 3 He-Qing Road, Beijing
08:10	<i>Pickup from Jade Palace Hotel</i>
08:20	<i>Pickup from Liaoning International Hotel</i>
09:00 – 09:10	Hai-Qing Lin (Director, Beijing Computational Science Research Center) Opening / Welcome
09:10 – 10:50 Morning Session I Chair: Hai-Qing Lin (Beijing Computational Science Research Center, China)	
09:10 – 10:00 (50 minutes)	Seigo Tarucha (RIKEN and University of Tokyo, Japan) Triple to quintuple quantum dots for making multiple qubits
10:00 – 10:50 (50 minutes)	Pasquale Scarlino (Delft University of Technology, Netherland) Electrical control of a long-lived spin qubit in a Si/SiGe quantum dot
10:50 – 11:20	<i>Coffee Break & Photo Taking</i>
11:20 - 12:10 Morning Session II Chair: Hai-Qing Lin (Beijing Computational Science Research Center, China)	
11:20 - 12:10 (50 minutes)	Ferdinand Kuemmeth (Niels Bohr Institute, University of Copenhagen, Denmark) Hole spin dephasing and spin-orbit coupling in Ge/Si nanowires
12:10 - 13:40	<i>Lunch & Break</i>
13:40 – 15:10 Afternoon Session I Chair: Jiangfeng Du (University of Science and Technology, China)	
13:40 - 14:30 (50 minutes)	Sven Rogge (University of New South Wales, Australia) Dopant atoms and molecules in a semiconductor vacuum
14:30 – 15:10 (40 minutes)	Henrik Johannesson (University of Gothenburg, Sweden) Topological insulators, helical liquids, and Rashba interactions
15:10 - 15:30	<i>Coffee Break</i>

15:30 – 17:50 Afternoon Session II Chair: Xuedong Hu (University at Buffalo, SUNY, USA)	
15:30– 16:20 (50 minutes)	Andrew Dzurak (University of New South Wales, Australia) Electron Spin Qubits in Silicon Quantum Dots
16:20 - 17:00 (40 minutes)	William Coish (McGill University, Canada) Soft decoding of a quantum measurement apparatus
17:00 – 17:50 (50 minutes)	Andrea Morello (University of New South Wales, Australia) Storing quantum information for 35 seconds on a single spin in silicon
18:00 – 19:30	<i>Dinner</i>
19:30	<i>Pickup to Liaoning International Hotel & Jade Palace Hotel</i>
Friday, July 4, 2014	
08:10	<i>Pickup from Jade Palace Hotel</i>
08:20	<i>Pickup from Liaoning International Hotel</i>
09:00 – 10:30 Morning Session I Chair: Shiyao Zhu (Beijing Computational Science Research Center, China)	
09:00 – 09:50 (50 minutes)	Jiangfeng Du (University of Science and Technology, China) Quantum Computation and Quantum Metrology based on Single Electron Spin in Diamond
09:50 – 10:30 (40 minutes)	Renbao Liu (The Chinese University of Hong Kong, China) Nuclear spin correlations detected by central spin decoherence
10:30 – 11:30	<i>Coffee Break & Poster Session</i>
11: 30 - 12: 20 Morning Session II Chair: Shiyao Zhu (Beijing Computational Science Research Center, China)	
11:30 - 12:20 (50 minutes)	Guoping Guo (University of Science and Technology of China, China) Circuit QED with a graphene double quantum dot and a reflection-line resonator
12:20 - 13:50	<i>Lunch & Break</i>
13: 50 – 15: 20 Afternoon Session I Chair: Nan Zhao (Beijing Computational Science Research Center, China)	
13:50 - 14:40 (50 minutes)	HongWen Jiang (University of California, Los Angeles, USA) Exploration of Si MOS Based Spin Qubits
14:40 - 15:20 (40 minutes)	Eugene Sherman (Basque Country University, Spain) Entangled states with spin-orbit coupling: spin measurement and spin driving

15:10 - 16:20	<i>Coffee Break & Poster Session</i>
16:20 – 17:50 Afternoon Session II Chair: Jian-Qiang You (Beijing Computational Science Research Center, China)	
16:20 - 17:10 (50 minutes)	Mark Eriksson (University of Wisconsin, USA) High fidelity quantum dot hybrid qubit
17:10 - 17:50 (40 minutes)	Susan Coppersmith (University of Wisconsin, USA) Theory of semiconductor quantum dot hybrid qubits: towards large-scale fault-tolerant operation
18:00	<i>Pickup to Liaoning International Hotel</i>
18: 30	<i>Banquet (2nd Floor of Liaoning International Hotel)</i>
Saturday, July 5, 2014	
08:10	<i>Pickup from Jade Palace Hotel</i>
08:20	<i>Pickup from Liaoning International Hotel</i>
09:00 – 10:40 Morning Session I Chair: HongWen Jiang (University of California, Los Angeles, USA)	
09:00 – 09:50 (50 minutes)	Joerg Wrachtrup (University of Stuttgart, Germany) TBA
09:50 – 10:40 (50 minutes)	Tim H. Taminiau (Delft University of Technology, Netherland) Quantum networks and quantum information with spins in diamond
10:40 – 11:00	<i>Coffee Break</i>
11: 00 - 12: 45 Morning Session II Chair: Renbao Liu (The Chinese University of Hong Kong, China)	
11:00 - 11:40 (40 minutes)	Jaroslav Fabian (University of Regensburg, Germany) Spin relaxation in coupled quantum dots: spin hot spots and anisotropies
11:40 - 12:30 (50 minutes)	S. Das Sarma (University of Maryland, USA) Spin Quantum Computation and Topological Quantum Computation
12:30 – 12:45 (15 minutes)	Robert Joynt (University of Wisconsin, USA) Summary
12:45 - 14:00	<i>Lunch</i>
14:00	<i>Pickup to Liaoning International Hotel & Jade Palace Hotel</i>