FIRST Quantum Spin Information and Technology

School for spin and quantum information

September 24th, 2013

Takeda Hall, The University of Tokyo

9:00-9:15
Openning Remarks
Prof. Seigo Tarucha (The University of Tokyo)

9:15-10:40
Basics of spin qubits
Prof. Charles M. Marcus (University of Copenhagen) (45 min)
Qubits and Nanotechnology

Prof. Yasuhiro Tokura (Tsukuba University) (40 min)
Electron spins and magnetic field

10:40-11:10 COFFEE BREAK

11:10-12:35
Coupling distant qubits

Prof. Daniel Loss (University of Basel/RIKEN) (45 min)
Spin Qubits and Long-Distance Entanglement

Prof. Christopher Bäuerle (Institut Néel)
Single electron transfer between distant quantum dots (40 min)

12:35-14:00 LUNCH
14:00-15:30
**New materials**

Prof. Leo Kouwenhoven (TU Delft) (45 min)
Physics of Majorana Fermions

Prof. Wilfred van der Wiel (University of Twente) (40 min)
Quantum phenomena in hybrid inorganic-organic systems

15:30-15:50    COFFEE BREAK

15:50-16:55
**Coupling different qubit systems**

Prof. Yoshiro Hirayama (Tohoku University) (40 min)
Hyperfine interaction in semiconductor quantum systems

Prof. Michel Pioro-Ladrière (University of Sherbrooke) (25 min)
Hybrid quantum circuits with single spin qubits

16:55-17:05
**Closing Remarks**

Prof. Seigo Tarucha (The University of Tokyo/RIKEN)