

The 1st RIEC International Workshop on Spintronics

–Spin Transfer Phenomena–

Date: February 8th (Wed.) – 9th (Thu.), 2006

Venue: Laboratory for Nanoelectronics and Spintronics, RIEC Tohoku University

Program

Feb. 8th (Wed.)

- 9:20 **Opening**
 H. Ohno (Organizer, Tohoku Univ., Japan)
- 9:30 **Spin torque nano-oscillators; Experiment and theory**
 T. Silva (National Inst. of Standards Tech., USA)
- 10:10 **The diode effect in spin-transfer devices**
 Y. Suzuki (Osaka Univ., Japan)
- 10:50 *Coffee break*
- 11:10 **Sub-ns spin transfer switching of magnetization in nanopillars**
 C. Chappert (Univ. Paris-Sud., France)
- 11:50 **Micromagnetic simulation on the dynamics for spin transfer magnetization switching**
 K. Ito (Hitachi Europe, UK)
- 12:20 *Lunch*
- 14:00 **Spin transfer: switching, microwave generation, synchronization**
 A. Fert (Univ. Paris-Sud., France)
- 14:40 **Current-driven magnetization reversal in MgO based MT Js with CoFe(B) electrodes**
 J. Hayakawa (Hitachi Ltd., Japan)
- 15:10 **Spin-transfer switching in MgO-based magnetic tunnel junctions**
 H. Kubota (National Inst. of Advanced Industrial Science and Tech., Japan)
- 15:40 *Coffee break*
- 16:10 **Critical current reduction in current induced magnetization switching for exchange-biased CPP-GMR devices**
 Y. Jiang (Beijing Univ. of Tech., China)
- 16:40 **Gilbert damping constants in various ferromagnetic thin films**
 M. Oogane (Tohoku Univ., Japan)
- 17:10 **Pure spin current induced magnetization reversal without charge current**
(-17:40) Y. Otani (Univ. of Tokyo, Japan)
- 18:15- *Banquet* —Sendai Kokusai Hotel; “Steakery Thirty”—
20:00 (SS30 Bldg. 2-6-1 Chuo, Aoba-ku, Sendai phone: 022-267-8830)

Feb. 9th (Thu.)

- 9:40 **Magnetic racetrack – a Novel storage class memory**
S. Parkin (Almaden Research Center, IBM, USA)
- 10:20 **Current-driven domain wall motion in metal structures**
T. Ono (Kyoto Univ., Japan)
- 10:50 *Coffee break*
- 11:20 **Domain wall devices for logic and data storage**
R. Cowburn (Imperial College London, UK)
- 12:00 **Domain-wall motion driven by current in a ferromagnetic semiconductor (Ga, Mn)As**
M. Yamanouchi (Tohoku Univ., Japan)
- 12:30 *Lunch*
- 14:10 **Current-driven domain wall dynamics: theory and simulation**
S. Zhang (Univ. of Missouri-Columbia, USA)
- 14:50 **Threshold current in current-driven domain wall motion (theory)**
G. Tatara (Tokyo Metropolitan Univ., Japan)
- 15:20 **Spin-transfer torque and spin-motive-force in magnetic nanostructures**
S. Maekawa (Tohoku Univ., Japan)
- 15:50 *Coffee break*
- 16:20 **Micromagnetic simulation model of spin current induced domain wall motion**
Y. Nakatani (Univ. of Electro-Communications, Japan)
- 16:50 **Domain wall resistance in ferromagnetic (Ga, Mn)As with perpendicular easy axis**
D. Chiba (Japan Science and Tech. Agency, Japan)
- 17:20 **Theory of spin transport and spin transfer in modulated structures of (Ga, Mn)As**
T. Dietl (Polish Academy of Sciences, Poland)
- 18:00 **Closing**
(-18:10) H. Ohno (Tohoku Univ., Japan)