Program for French-US Workshop at NYU

All sessions will be in room 611, 6th floor of 2-4 Washington Square Place, New York, NY 10003

Monday, September 14, 2015

2:00 – 2:15 PM, Andrew Kent and Dafiné Ravelosona
Introduction to workshop and NYU, UCSD, Paris Sud, U. Lorraine Partner University Fund Project

Session I: Spintronics I, Session chair: Stephane Mangin

2:15 – 2:45 PM, Albert Fert
Two Dimensional Spin-orbitronics At Rashba, Topological Insulator, Oxide and DMI Interfaces

2:45– 3:15 PM, Daniel C. Ralph
Spin Transfer Torques from Spin-Orbit Interactions in Heavy Metals and Topological Insulators

3:15 – 3:45 PM, Gregoire de Loubens
Full Control of the Spin-wave Damping in a Magnetic Insulator Using Spin-Orbit Torque

3:45 PM Coffee Break

Session II: Spin and Nanoelectronics, Session chair: Eric Fullerton

4:15 – 4:45 PM Geoff Beach
Spin Orbit Torques and Chiral Spin Textures in Ultrathin Magnetic Films

4:45 – 5:15 PM Damien Querlioz
Neuroinspired Computing with Emerging Memory Devices.

5:15 – 5:45 PM Jayasimha Atulasimha
Straintronics: Energy Efficient Computing with Strain Switched Nanomagnets

5:45 – 6:15 PM Jonathan Sun
Spin-torque Materials, Devices and Systems: Opportunities and Challenges
Tuesday, September 15, 2015

Session III: Nanoelectronics, Session chair: Dafine Ravelosona

9:00 – 9:30 AM, Sandip Tiwari
*Fluctuation and Dispersion Consequences in Nanoelectronics*

9:30 – 10:00 AM, Ulf Genser
*Two-channel Kondo Effect in a HybridMetal-2DEG Sample Using Pseudo-Spins*

10:00 – 10:30 AM, Javier Villegas
*Oxide Superconducting Hybrids*

10:30 – 11:00 AM Coffee Break

11:00 – 11:20 AM, Marion Lavanant
*Influence of dipolar fields on the field and current induced magnetization switching in perpendicular magnetic tunnel junctions*

11:20 AM – 11:40 AM, Daniel Gopman
*Voltage-Induced Control of Perpendicular Magnetic Anisotropy in Co/Ni Multilayers*

11:40 – 12:00 PM, Christian Hahn
*Time-Resolved Studies of Magnetization Reversal of Orthogonal Spin Transfer Devices*

12:00 – 1:00 PM Lunch Break

Session IV: Imaging and Ultrafast Dynamics, Session chair: Gregoire de Loubens

1:00 – 1:30 PM, Gregory Malinowski
*Hot Electrons Driven Ultrafast Demagnetization*

1:30 – 2:00 PM PM, Sylvia Matzen
*Imaging of Ferroelectric Domain Structure in PZT Thin Film-Based Capacitors for Their Integration Into Hybrid Structures and Magneto-Electric Devices”*

2:00 – 2:30 PM, Hendrik Ohldag
*Time Resolved Magnetic Microscopy to Study Spin Current Induced Magnetization Dynamics*

2:30 – 3:00 PM Kai Liu
*Perpendicular Magnetic Anisotropy Systems for Artificial Skyrmion Lattices and Magnetic Recording*