

# EMERGING TOPICS & APPLICATIONS IN SPINTRONICS

**Date:** 23rd April 2018, Monday  
**Time:** 9.00 am to 5.00 pm  
**Venue:** E4-04-05, Engineering Block E4, Faculty of Engineering  
National University of Singapore

## Programme

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- 0900 **Opening Address**  
• Mourad Chérif (Univ. Paris13) and Frédéric Petroff (CNRS), France  
• Yang Hyunsoo, SG-SPIN
- 0920 **Alexandra Mougin, LPS, CNRS, Univ. Paris-Saclay**  
Imaging and Dynamics in Magnetism (IDMAG) team
- 0940 **Chen Jingsheng, NUS (Materials Science and Engineering)**  
Anisotropic Gilbert damping in perovskite  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$  thin film
- 1000 **Christophe Gatel, CEMES, CNRS, Univ. de Toulouse**  
Magnetic transition of MnAs: EMCD and electron holography in situ studies at the nanometer scale
- 1020 **Tea break**
- 1040 **Wu Yihong, NUS (Electrical and Computer Engineering)**  
All-in-one Spin Hall Magnetic Sensor
- 1100 **Myriam Pannetier-Lecoeur, SPEC, CEA, CNRS, Univ. Paris-Saclay**  
Spin electronics for local biomagnetic recordings
- 1120 **Ramanathan Mahendiran, NUS (Physics)**  
Electrical response of colossal magnetoresistive oxides in sub-Tesla magnetic fields
- 1140 **Lucian Prejbeanu, SPINTEC, CEA, CNRS, Univ. Grenoble Alpes**  
MRAM strategies for ultrafast switching and highly thermally stable sub-20nm cells
- 1200 **Lunch**
- 1320 **J.-Carlos Rojas-Sánchez, IJL, CNRS, Univ. de Lorraine**  
Spin-orbitronic, Thermoelectricity on NiFe, Potential for giant Spin Seebeck effect in YIG/ $\alpha$ -Sn and ultrafast fs switching
- 1340 **Yang Hyunsoo, NUS (Electrical and Computer Engineering)**  
Anomalous spin-orbit torques and their applications
- 1400 **Mourad Chérif, LSPM, CNRS, Univ. Paris 13**  
Dzyaloshinskii-Moriya interaction in ultrathin magnetic stacks
- 1420 **Tea break**
- 1440 **Elbert Chia, NTU (Physics and Applied Physics)**  
Giant Ultrafast Spin Injection and Spin-to-Charge Conversion in Topological Materials
- 1500 **Nicolas Reyren, Unité Mixte de Physique, CNRS/Thales Univ. Paris-Saclay**  
Individual skyrmions in magnetic multilayers at room temperature : Electrical manipulation considering the thickness-dependent magnetization profile scale
- 1520 **M. B. A. Jalil, NUS (Electrical and Computer Engineering)**  
Weyl and Dirac semimetals – Fermi arc states and tunnelling transport
- 1540 **Closing and Lab tours**