Spintronics IX  
Sunday - Thursday 28 August - 1 September 2016

Session 10B:  
Voltage Control and New Devices  
Tuesday 30 August 2016 
3:50 PM - 5:55 PM  
Session Chair: Shunsuke Fukami, Tohoku Univ. (Japan)

Giant voltage controlled magnetic anisotropy in strained heavy metal/ferromagnet/insulator junctions *(Invited Paper)*  
Paper 9931-90  
Author(s): Nicholas Kioussis, California State Univ., Northridge (United States)

Electric field control of magnetism *(Invited Paper)*  
Paper 9931-91  
Author(s): Ramamoorthy Ramesh, Univ. of California, Berkeley (United States)

Magnetic phase transitions in multiferroic systems *(Invited Paper)*  
Paper 9931-92  
Author(s): Piero Torelli, Istituto Officina dei Materiali (Italy)

Layer coupling and read disturbances in a buffered magnetic logic environment *(Invited Paper)*  
Paper 9931-93  
Author(s): Thomas Windbacher, Alexander Makarov, Viktor A. Sverdlov, Siegfried Selberherr, Technische Univ. Wien (Austria)
CMAT non-volatile spintronic computing: complementary MTJ logic (Invited Paper)
Paper 9931-94
Author(s): Joseph S. Friedman, Univ. Paris-Sud 11 (France)
Magnetic tunnel junctions (MTJs) have thoroughly demonstrated their utility as a non-volatile memory storage element, inspiring their application to a memory-in-logic computer that would overcome the von Neumann bottleneck. However, MTJ logic gates must be able to cause other MTJs to switch, thus ensuring the cascading capability fundamental to efficient computing. Complementary MTJ logic (CMAT) provides a simple circuit structure through which MTJs can be cascaded directly to perform logic operations. In this novel logic family, charge pulses resulting from MTJ switching create magnetic fields that switch other MTJs, providing impetus for further development of MTJs for computing applications.