

IEEE Technical Seminar Organized by

Nuclear and Plasma Sciences

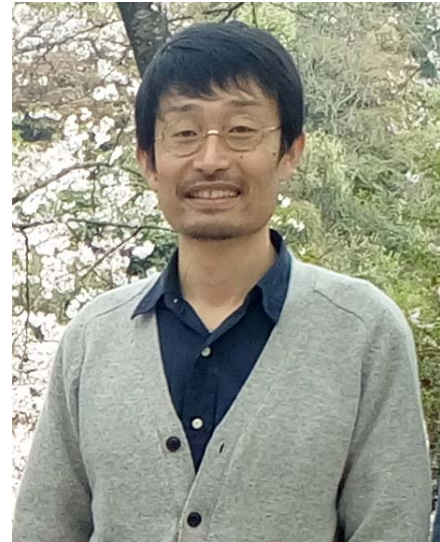
You are cordially invited to a seminar on

Pure spin current generated by spin pumping

SPEAKER: **Assoc. Prof. Y. Fukuma**
Kyushu Institute of
Technology (Kyutech),
Japan

TIME/DATE: **10:00 am, 10th Jan
2017**

VENUE: **Block 7, Basement 1,
Room 22 (7-B1-22)
National Institute of
Education
1 Nanyang Walk,
Singapore-637616**



ABSTRACT:

Over the past decade large number of experimental and theoretical attempts have been focused to construct new insights and applications of spin pumping effect since Tserkovnyak, et al. theoretically proposed the spin pumping effect to generate/inject pure spin current from a precessing ferromagnet to neighboring normal metal. Spin pumping driven by its versatility is widely explored to determine spin to charge current conversion efficiency referred as spin Hall angle of large variety of materials. In prototypical setup of spin pumping-inverse spin Hall effect measurement, spin pumping occurs during the excitation of ferromagnetic resonance when precession of magnetization in ferromagnet injects pure spin current into adjacent nonmagnetic metal layer then the injected spin current is converted into transverse dc voltage by means of inverse spin Hall effect. Here, I will present their experimental technique, control of magnetic properties by using spin pumping, and electric-field-control of spin pumping.

BIOGRAPHY:

Prof. Y. Fukuma is serving as an Associate Professor at Frontier research academy of young researchers, Kyushu institute of technology, Japan and heading a Spin Device Laboratory. He is also a research scientist in Quantum nano-magnetics research group. The Spin device Laboratory and Quantum Nano-Magnetics group has been working experimentally and theoretically on the spintronics and Nano-magnetism. They are actively involved in the spin dependent transport properties and got expertise in the spin injection and spin dynamics for various device applications. The group has developed various spin dependent characterizations which are used to investigate direct and inverse spin Hall Effect, spin transfer torque magnetization switching, spin torque ferromagnetic resonance, and spin wave excitation.

Best regards,

Rajdeep Singh RAWAT (Dr.)
Chair, IEEE Nuclear & Plasma Sciences Society Singapore Chapter

Contact: Dr. Rajdeep Singh RAWAT
rajdeep.rawat@nie.edu.sg
Tel: 6790 3908

Getting to NIE: <http://www.nie.edu.sg/about-us/visit-us#nie-campus-map>

