Graduate Program in Spintronics Seminar

& 110th Nano-Spin Engineering Seminar

# “New Mechanisms for Spin-Orbit Torques”

Spin-orbit torques hold the promise for energy-efficient manipulation of the magnetization in magnetic devices. They couple angular momentum from the lattice to the magnetization through orbital moments and the spin system via the crystal field potential, spin-orbit coupling and the exchange interaction. Interfaces are crucially important in these devices: they provide inversion symmetry breaking; they convert spin currents into torques; and their reduced symmetry gives rise to spin-orbit coupling localized there. In this talk, I explore some of the mechanisms, particularly the effects of interfaces, that give rise to spin-orbit torques and explore some of the consequences.

## Dr. Mark D. STILES

**National Institute of Standards and Technology (NIST)**

Time : **1:30pm-3:00pm**

Date : **Wednesday, December 11,** 2019

Venue: **Room A401,**
Laboratory for Nanoelectoronics and Spintronics, RIEC, Katahira Campus


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