

Chez Pierre

Presents ...

Monday, September 9, 2024

12:00pm - 1:00 pm

Duboc Room – 4-331



Chez Pierre Seminar

Jiadong Zang, University of New Hampshire

”Topological Hall Effects in Chiral Magnets”

Chiral magnets are a series of magnets with broken inversion symmetry. A new type of spin interaction therein, the Dzyaloshinskii-Moriya interaction, stimulates the formation of many novel topological spin textures. One important example is the emergence of magnetic skyrmion, whose nontrivial topology enables unique dynamical property and thermal stability and gives rise to promising applications in future spintronic devices.

Other than neutron scattering and transmission electron microscopy, the topological Hall is an important identification of skyrmions. It features a hump in the Hall resistivity curve under the variation of external magnetic field. In this talk, I will discuss the topological Hall effect in a series of materials. I will also discuss alternative mechanism for the topological Hall-like effect in topologically trivial systems.