PHYSICS COLLOQUIUM:
Theoretical Studies of Magnetic and Topological Materials

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Date:
4/15/2022

Time:
10:30 AM - 11:50 AM

Link:
SSB 120

Abstract:

Density functional theory calculations play an important role in predicting new material systems for new technological developments as well as in explaining experimental observations. I will discuss several examples of our recent theoretical work on magnetic materials, from magnetic molecules to magnetic topological insulators. For magnetic molecules, we will focus on the spin-vibration coupling that determines the coherence time of quantum spin states.

For magnetic topological insulators, I will discuss the proximity effect of magnetic films on the topological surface states for generating the quantum anomalous Hall effect and Axion insulator state. If time permits, I will also have short discussion on the possible sources of magnetic noise that affects the performance of qubits and NV probe.

About The Speaker:

Ph. D, 1989 Institute of Physics, Academia Sinica
Postdoc 1989-1994, Northwestern University
Assistant, associate and full professor, 1994-2001, California State University, Northridge
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