

DEPARTMENT OF PHYSICS & ASTRONOMY

Physics & Astronomy Colloquium

Dr. Cagliyan Kurdak

University of Michigan

3:30 - 4:30 p.m. | Tuesday, April 1

Science Building 234

Emergence of New States of Quantum Matter Associated with Extended Defects in Topological Insulators

It is well known that topological insulators have topologically protected conducting surface states. In some cases, these materials can also host conducting pathways via bulk defects such as twin boundaries and dislocations. Our goal is to study the unique properties of the topological matter forming around extended defects. Observing these conducting paths can be highly challenging due to the presence of other transport paths. In this talk, I will summarize our strategies to characterize conduction via defects in a variety of topological materials, such as $(\text{Bi}_{1-x}\text{Sb}_x)_2\text{Te}_3$, SmB_6 , and BiSb alloys.

Refreshments at 3 p.m. | SC 103

