Departments of Physics Colloquium

Magnetoresistance Measurements on Samarium Hexaboride - Cornering the Parameter Space of an Illusive Correlated Topological Insulator

Cagliyan Kurdak
Department of Applied Physics
University of Michigan

Friday, October 9, 2015
1:30 – 2:30 PM
Venue: OE 134, MMC

Abstract: The recent conjecture of a topologically-protected surface state in samarium hexaboride and the verification of robust surface conduction below 4 K have led to a large effort to understand the surface states. In this talk, I will describe our evolving understanding of this illusive material and our recent attempts to corner the parameter space for the surface conduction using high field magnetotransport measurements.

Biography: Prof. Cagliyan Kurdak received his B.S. degree in electrical engineering from Middle East Technical University, Ankara, Turkey, in 1988, and the Ph.D. degree in electrical engineering from Princeton University, Princeton, NJ, in 1995. He joined the faculty with the University of Michigan, Ann Arbor, in 1998, after working as a post-doctoral scientist at the Physics Department, University of California, Berkeley. His current research interests include the study of electrical properties of low-dimensional electron systems. Prof. Kurdak is an Alfred P. Sloan Research Fellow. He is currently serving as the Director of the Applied Physics Program, University of Michigan, and he is the founder of the Imes-Moore Fellowship Program, a bridge program designed to prepare students for doctoral studies in Applied Physics.

The event is free and open to the public.
Future seminars can be found at http://physics.fiu.edu/seminars/