

PHYSICS AND ASTRONOMY COLLOQUIUM

Dr. George Kirczenow

Simon Fraser University

"Berry's Phase and Topological Currents in Graphene Nanostructures"

<u>Abstract</u>

The overall phase of a quantum state was for many years thought not to affect the observed properties of physical systems. That this is not the whole story was pointed out in 1984 by Michael Berry who showed that the evolution of the overall phase of the quantum state of a system whose Hamiltonian is varied slowly can have non-

introduced. Its implications for the electronic structure and transport properties of graphene, a two-dimensional material consisting of a single atomic layer of carbon -related effects have

been observed in nondevice will be discussed from a theoretical perspective.

> Wednesday, September 28, 2016 3:00 p.m. Elliott Building Room 167