



**DEPARTMENT OF PHYSICS AND ASTRONOMY  
and  
DEPARTMENT OF MATHEMATICS**



***Topology-Physics Seminar Series***

**Chern classes and topological insulators**

Professor Michael Usher

Department of Mathematics, University of Georgia

Certain materials that are insulating in their interiors have conducting states on their boundaries that are robust to impurities. This turns out to result from the nontriviality of certain vector bundles over the torus. This will be a mathematician's attempt to explain this connection, without assuming background in either topology or quantum mechanics.

**Tuesday, October 29, at 3:00 PM,  
CSP Conference Room 322, Physics Building**

Local Contact: Prof. Y. Abate, [yohannes.abate@uga.edu](mailto:yohannes.abate@uga.edu)