

Materials Science and Technology Division

Materials Theory Group

# **“Quantum hall effect in a Weyl semi-metal”**

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Tuesday, May 17, 2011  
11:00 a.m.  
4515/HTML, Room 265

## **Abstract**

Weyl semi-metal is a novel band-structure in three dimensions which involves two component Dirac dispersion. It has been used to describe neutrinos in the high energy context. In this talk I firstly introduce the possible realization of Weyl semi-metal phase in correlated band structures, including pyrochlore iridates. Then I will focus on its novel response to an external magnetic field. Striking experimental effects will be discussed which can be used as intrinsic signatures to detect the Weyl semi-metal phase in materials.

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