

Condensed Matter Theory Center Seminar



Wednesday, February 20
11:00 am – 12:30 pm, Physics Building 2205

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“Topological States in Correlated Systems: From Weyl Semimetals to Topological Phases of Interacting Bosons”

I will discuss novel topological phases beyond the well-known topological insulators of free fermions. These include Weyl semimetals, which may be considered topological semimetals since they exhibit 'Fermi arc' surface states and an unusual electromagnetic response. Possible materials realizations will be also be proposed. Next, I will talk about recent theoretical breakthroughs in identifying two and three-dimensional topological phases that only appear in interacting systems, but which are close analogs of free fermion topological insulators. Realizations in bosonic or spin systems will be discussed, along with prospects for creating such states in cold atom systems.

(All are welcome to attend)

