Arun Paramekanti

University of Toronto, Canada

Chiral spin liquids as melted non-coplanar spin crystals

Correlation effects in topological flat bands have been shown to drive chiral spin liquids which are analogous to lattice fractional quantum Hall states. In this talk, I will discuss a different perspective on such chiral spin liquids in SU(2) invariant magnets which is to view them as arising from melting of non-coplanar magnetic orders. This will be illustrated using examples on various 2D lattices which we have studied using numerical simulations - exact diagonalization, DMRG, and variational Monte Carlo simulations.