

ICTS Seminar

Title : When spin liquids order ... but just a bit.

Speaker : Ludovic Jaubert, Okinawa institute of science and technology,
Japan

Date : Wednesday, December 7, 2016

Time : 11:30 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : We will discuss the possibility for spin liquids to co-exist with long-range order. We will start with a relatively simple variant of the spin-ice model where a Coulomb gauge theory persists in presence of long-range antiferromagnetic order. This phenomenon has been coined as "spin fragmentation" and has recently been observed in neutron-scattering measurements of $\text{Nd}_2\text{Zr}_2\text{O}_7$ and artificial lattices grown by nano-lithography. Then, motivated by the increasing number of materials with strong spin-orbit coupling, we will show how to use the anisotropy of magnetic interactions in order to tune the system into such a phase, and the different facets this co-existence of order and spin liquids can take.