

ICTS Seminar

Title : Critical Phenomena and Griffiths-McCoy Singularities in Quantum Spin Glasses

Speaker : Allan Peter Young, University of California, Santa Cruz, USA

Date : Tuesday, November 7, 2017

Time : 11:30 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Quantum phase transitions (i.e. phase transitions at zero temperature) in disordered systems can display unusual features, such as "infinite-randomness" critical phenomena, and Griffiths-McCoy (GM) power-law singularities even in the paramagnetic phase. In this lecture I will review these concepts in the context of quantum spin glasses, discuss the results of some (mainly old) Quantum Monte Carlo simulations, and conclude by describing some recent calculations with Rajiv Singh using series expansions to explore quantum spin glass critical behavior and GM singularities in a wide range of dimensions.