

Title: Evidence for a Glass Transition in the Ising Model with Nearest Neighbour and Next Nearest Neighbour Interactions.

Abstract: Striped and labyrinth like structures are observed in a wide variety of thin films including garnet films, ultra-thin magnetic films and fluid layers that exhibit nano-phase separation. In this talk, the evidence from Monte Carlo studies of the next nearest neighbour interaction Ising model that non-equilibrium effects can play a profound role in the properties of such systems, is discussed. In particular, this evidence points to the existence of a glass transition for a specific choice of model parameters.

Bio: Keith De'Bell is a Professor of Mathematics at St. Francis Xavier University. His current research focuses on the emergence of structures in complex systems. Many of his publications deal with changes of state and emergence of long-range order in physical systems such as ultrathin magnetic films