



Bangalore Probability Seminar

Title : The supercritical phase of the φ^4 model is well-behaved

Speaker : Trishen Gunaratnam (TIFR-Mumbai and ICTS-TIFR, Bengaluru)

Date : Monday, 07 April 2025

Time : 2:00 PM (IST)

Abstract : The φ^4 model is a generalization of the Ising model to a system with unbounded spins that are confined by a quartic potential. A natural random cluster representation for the model arises by considering the sign field, which is distributed as an Ising model in a environment. I will talk about a proof of local uniqueness of the macroscopic cluster throughout the supercritical phase of this percolation model. This serves as a crucial step towards establishing fine properties of the supercritical phase of the spin model via renormalization arguments. To illustrate this, I will discuss a proof of surface order large deviations for the empirical magnetization. Based on joint work with Christoforos Panagiotis, Romain Panis, and Franco Severo.

Venue : Madhava Lecture Hall

Zoom Link: <https://us02web.zoom.us/j/88670406480>

Meeting ID: 886 7040 6480