



INTERNATIONAL  
CENTRE *for*  
THEORETICAL  
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

## **ICTS Mathematics Seminar**

**Title** : Intersections of random walks

**Speaker** : Trishen Gunaratnam (Tata Institute of Fundamental Research, Mumbai)

**Date** : Wednesday, 11 June 2025

**Time** : 10:30 AM (IST)

**Abstract** : Random walks are amongst the most fundamental objects in probability theory. Although simple to define, they exhibit a rich phenomenology and their rigorous study has led to the development of deep and beautiful math. Beyond their intrinsic interest, random walks play a significant role in the study of various other models of statistical physics and even have applications to quantum field theory. In this talk, I will discuss the intersection behaviour of random walks on the hypercubic lattice  $\mathbb{Z}^d$ . I will give glimpses of triviality phenomena in high dimensions and intersection exponents in low dimensions.

**Venue** : Madhava Lecture Hall  
Offline Mode