



ICTS

INTERNATIONAL
CENTRE *for*
THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Bangalore Probability Seminar

Title : Probability and Randomness in Fair AI/ML

Speaker : Amit Deshpande (Microsoft Research)

Date : Monday, 24 August 2026

Time : 02:00 PM (IST)

Abstract : We present a compact formula for the exact partition function of the d-dimensional arithmetic Ising model (AIM). For a 2×2 system, we express it analytically using the q-Hurwitz-Lerch zeta function and derive explicit forms for the free energy and entropy. Additionally, we find that the entropy increases at high temperatures, supporting the presence of entropic order. This talk is based on a paper to appear this week with Anu Dhochak and Shrinit Singh.

Venue : Madhava Lecture Hall

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

Meeting ID: 886 7040 6480