Theoretical Statistics and Mathematics Unit, Kolkata
INDIAN STATISTICAL INSTITUTE

Thesis Proposal Seminar

Date: June 20, 2025
Time: 2:15 PM

MODE: Online

Google Meet Link

https://meet.google.com/rdm-wpjk-yht

TITLE:

Random Matrices with Dependent Entries

SPEAKER:

Himasish Talukdar

Stat-Math Unit, ISI Kolkata

ABSTRACT:

In this talk, we will discuss the limiting spectral properties of several random matrix models where the matrix entries exhibit non-trivial dependencies. Specifically, we will consider: (i) the Hypergraph Adjacency Matrix (HAM) of an Erdős–Rényi r-uniform random hypergraph, a matrix-valued contraction of the associated adjacency tensor, and the corresponding Laplacian matrices; (ii) matrix-valued contractions of the Gaussian Orthogonal Tensor Ensemble (GOTE), a natural tensor extension of the Gaussian Orthogonal Ensemble (GOE); and (iii) certain truncated versions of sample covariance and Kendall's τ matrices, which serve as examples of matrix-valued U-statistics.

ALL ARE CORDIALLY INVITED