Poster Snapshot

Fluctuations of Extreme Eigenvalues and Eigenvectors in Perturbed Wigner-Type Matrices

Bishakh Bhattacharya (ISI)

In this talk, we will study perturbations of Wigner matrices with a variance profile, where the entries have the form $X_{ij} f(\frac{i}{N}, \frac{j}{N})$. Here, X_{ij}'s are normalized variables satisfying specific moment conditions, and f is a bounded, measurable, and Riemann integrable function. We will analyze the fluctuations of the largest eigenvalue of this perturbed matrix, as well as the asymptotic alignment of the corresponding normalized eigenvector.

This is an ongoing joint work with Arijit Chakrabarty and Rajat Subhra Hazra