Stanford University
Departments of Mathematics and Statistics

Probability Seminar

4:30pm, Monday, March 20, 2017
Sequoia Hall Room 200
Cookies served at 4pm, 1st floor Lounge.

Speaker: Anirban Basak, Weizmann Institute of Science

Title: Circular law for sparse non-Hermitian matrices

Abstract:
Recently Tao and Vu have shown that the empirical spectral distribution of a matrix with i.i.d. entries of zero mean and unit variance converge to the circular law as the dimension of the matrix grows to infinity. In this talk, we will consider a sparse version of the random matrix above and show that the same limit continues to hold. Our result also extends to the spectrum of the adjacency matrix of a sparse directed Erdős–Rényi graph.

This is joint work with Mark Rudelson.