

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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On the Spectral theory of random matrices

Tuesday, September 8, 2015
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

In probability theory and mathematical physics, a random matrix is a matrix-valued random variable. Many important properties of physical systems can be represented mathematically as matrix problems. Random matrix theory has also found applications to mathematical statistics in estimation of covariance matrices; in numerical analysis to describe computations errors; in number theory: the distribution of zeros of the Riemann zeta function.

The talk will deal with the spectral theory of random matrices, i.e. the distribution of the eigenvalues as the size of the matrix goes to infinity. Starting with random matrices with Gaussian correlated entries the talk will also cover various other models with short and long memory. The tools used in this field of research combine results from algebra, operator theory, harmonic analysis and probability theory.

To request an interpreter or other accommodations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.