Temple University Mathematics Colloquium

Brian Rider

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will speak on

Continuum Limits of Random Matrices

ABSTRACT: Investigations into the spectrum of large dimensional random matrices has led to the discovery of important new points of attraction in the space of distributions. A useful analogy can be made with the classical central limit theorem, stating (more or less) that the sum of suitably normalized independent variables tends to the Gaussian distribution.

One famous result connected to random matrices is that the limit law for the spectral radius of a random hermitian matrix (known as the Tracy-Widom distribution) also describes the fluctuations in a rich class of models from combinatorics and statistical mechanics. After an overview of the present status of these ideas, I will describe work of mine (with various collaborators) which provides novel descriptions of the Tracy-Widom law in terms of random "continuum" operators.

Wednesday, 15 February 2012
Lecture at 4:00 pm
Coffee, tea, and refreshments from 3:30-5:00 pm
Room 617, Wachman Building
Department of Mathematics