

Analysis/dynamical systems Seminar

Thursday, March 26, 2015

4:00-4:50 pm in Hume 331

Random Geometry in the Spectral Measure of the Circular Beta Ensemble

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The Circular Beta Ensemble is a family of random unitary matrices whose eigenvalue distribution plays an important role in statistical physics. The spectral measure is a canonical way of describing the unitary matrix that takes into account the full operator, not just its eigenvalues. When the matrix is infinitely large (i.e. an operator on some infinite-dimensional Hilbert space) the spectral measure is supported on a fractal set and has a rough geometry on all scales. This talk will describe the analysis of these fractal properties. Joint work in progress with Raoul Normand and Balint Virag.