COLLOQUIUM

Cleveland State University
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When is normal normal? Subtitle: Approximation results for random measures

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3:00 PM
Rhodes Tower 1516

Abstract: There is a large class of results which say that, for parametrized collection of random variables, a random variable from the collection behaves a certain way for “most” values of the parameter. A nice example of such a result is a theorem of Persi Diaconis and David Freedman, which roughly says that if you have a large collection of high-dimensional data points, most one-dimensional projections of the data will look Gaussian even if the data have no particular structure. In this talk, I'll discuss a quantitative version of this result which aims to address the question, “When is an almost-Gaussian projection interesting?” I'll give an overview of the proof, which uses Stein's method, the concentration of measure phenomenon, and the geometry of certain function spaces. The talk is meant to be friendly and in particular assumes no prior knowledge of
Stein's method or measure concentration.

Refreshments at 2:30PM in RT 1517