

“It is the supreme law of Unreason.”

— Sir Francis Galton

The Trivial Notions Seminar  
Proudly Announces

The central limit theorem

A talk by  
Benjamin Landon

**Abstract**

In 1733 de Moivre expanded  $(1 + 1)^n$  and noticed that the graph of the binomial coefficients tends to a bell curve for large  $n$ . In 1810 Laplace inserted  $\sqrt{-1}$  into the moment generating function and obtained the first central limit theorem, stating that large sums of independent random variables are approximately Gaussian. In this talk we'll see a few proofs of the central limit theorem and try to answer the question “Why Gaussians?” We'll also discuss some extensions and applications such as the Berry-Esseen theorem, geometric CLTs for projections from high-dimensional convex sets, hypercontractivity for Hermite multipliers and the sharp Hausdorff-Young inequality.

Thursday, September 17<sup>th</sup>, at 1:00 pm  
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