



Colloquium

Wednesday November 5, 3:00 p.m. (8th Period)

In the Atrium
Refreshments provided.

Speaker: Brendan Williams

Title: A Berry-Esseen Theorem and Its Applications

Abstract

The central limit theorem is foundational to statistics, and ensures that sums of independent random variables converge in distribution to a normal distribution. The Berry–Esseen theorem strengthens this result by ensuring quantitative convergence rates.

In this talk, we present a theorem providing Berry-Esseen rates for a broad class of statistics of dependent (ϕ -mixing) and non-stationary random variables. We then discuss extensions of this theorem, and show how it can be applied in a few concrete settings.