Anthony Sisti* (anthony.sisti@uconn.edu), Phanuel Mariano, Rajeshwari Majumdar and Lowen Peng. The Derivation of the Black-Scholes Formula Using a Central Limit Theorem Argument.

The standard method of deriving the Black-Scholes European call option pricing formula involves stochastic differential equations. In this talk we provide an alternate derivation using the Lindeberg-Feller central limit theorem under some technical assumptions. This method allows us obtain the Black-Scholes formula using undergraduate probability. Theoretical results are supplemented with market simulations. (Received September 21, 2017)