

Normal approximation by Stein's method

Louis H. Y. Chen
National University of Singapore

Key words and phrases: Stein's method, normal approximation, moderate deviations, Malliavin calculus

AMS 2010 Subject Classifications: Primary 60F05, 60F10 and 60F17, 60B12

Abstract

I will begin with Stein's original ideas and discuss applications to local dependence, moderate deviations, discretized normal approximation and multivariate normal approximation. If time permits, I will touch on applications to algebraic combinatorics and connection to the Malliavin calculus. This talk is based on material taken from a book which I am writing jointly with Larry Goldstein and Qi-Man Shao.