On some Applications of Stein's Method

Romeo NEGREA

Abstract

The aim of this note is to give an application of Stein's method for a class of distributions by the type $\mathcal{L}\left(\sum_{k\geq 1}c_kPo\left(\lambda_k\right)\right)$. For these distributions we give the adequate Stein equation and Stein operator. Also, we obtain an estimation of error bounds of approxi-mation for these distribution type.

Key words and phrases: Stein's method, compound Poisson, Levy distribution, distributional approximation.

Mathematics Subject Classification: 62E17; 60F05.