

Flexible Generalized Skew Normal Distribution with Applications

Tingting Tong and Xiangfei Chen

Advisor: Tonghui Wang

Abstract : In this talk we will propose a new asymmetric model more flexible than the generalized skew-normal model through the inclusion of an additional parameter which can lead to both unimodal and bimodal distributions. Basic properties of this family of distributions and the maximum likelihood estimation are discussed. Three simulation studies are reported and two real data applications illustrate the flexibility of the model compared with traditional proposals in the literature.

Keywords: flexibility, bimodal, skewnormal, asymmetric.