Functional data analysis for extreme data

ABSTRACT

The performance of extreme data is observed by using functional data analysis with two extreme values theory approaches. Functional data analysis is one of the techniques to represent data in a functional form or as a smooth curve rather than in a discrete form. This functional observation will be fitted using fourier series by least squares and roughness penalty method. The data will be tested on block maxima and r-largest order statistics approaches to indicate what numbers of data required to have the best fitted curve. The finding illustrates three r-largest order statistics approach gives a better performance for functional data analysis which deals with extreme values data.