Semi-parametric estimation in Statistics of Extremes

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Abstract

The main objective of the Extreme Value Theory is the prediction of rare events, i.e., potentially disastrous events, of enormous importance to society and of great social impact, so that the proper estimation of the parameters related to this type of events plays an important role in Statistics of Extremes. The distribution of the maximum of n independent and identically distributed observations, after adequate normalization, converges to the so-called Extreme Value distribution, where the shape parameter of the distribution, ξ, is called the tail index or extreme value index. In this talk, a brief overview of the semi-parametric inferential procedures used to estimate ξ and other parameters of rare events is presented.