

A Method of Moments Estimator for Tail Dependence

Let $(X_1, Y_1), \dots, (X_n, Y_n)$ be a random sample in \mathbb{R}^2 , from a continuous distribution function F . If the centered and scaled, coordinate-wise maximum of X_1, X_2, \dots, X_n converges in distribution to a random vector with distribution function G , and G has non-degenerate margins, we say that F is in the (max-)domain of attraction of G . Under the assumption that the copula of G comes from some parametric family, we propose a method of moments estimator (MoME) of the tail dependence of F .

In this talk I will present the basic ideas of multivariate extreme value theory, introduce the MoME of the stable tail dependence function, describe its asymptotic behavior and illustrate the estimator's performance on examples .