

COLLOQUIUM

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Reduced Bias Estimators in Joint Tail Modeling

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Abstract

Ledford and Tawn (1997) introduced a flexible bivariate tail model, introducing the coefficient of tail dependence η , giving information about the dependence of the extreme values of two variables. We specify the slowly varying part of the model as it was done by Hall (1982) in the univariate tail estimation. Based on Beirlant et al. (2009), we propose a bias reduced estimator for the coefficient of tail dependence and for the estimation of small tail probabilities. We discuss the properties of these estimators via simulations and real life examples. Furthermore we discuss some theoretical asymptotic aspects of this approach.

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