Two-steps Estimation problem for a new family of copula

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Abstract

This work delves into continuous state stationary reversible Markov chains generated by a new family of copulas with marginals from a scale-parameter family. A 2-steps estimation procedure is used to find the estimators of copula parameters. This method requires a consistent estimator of the scale parameter to establish large sample properties of estimator. A simulation study was also done in R to support the findings.

Keywords: Reversible Markov chain, copula based Markov chain, square integrable copula densities, parameter estimation, maximum likelihood estimation, robust estimation, exponential marginals.