Tests in Modeling Continuous Multivariate Distributions Using Copulas

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Keywords: goodness of fit, multivariate independence, pseudo-observations, rank-based tests, serial independence

Copula models have become popular in many areas such as finance, insurance, and hydrology. Improper use of copula, including that allegedly destroyed the Wall Street in October, 2008, has raised concerns about application of copulas. Hypothesis tests provide guard against abuse of copulas. A copula model is needed only when independence is rejected. A specific form of copula cannot be applied to give interpretation unless it passes goodness-of-fit tests. We presents tests for independence and goodness-of-fit of copula models, among other recent development including selected extreme value copulas, in the R package **copula**. Some implementation details are documented. Usage of the tests are illustrated with real examples.