4th Workshop on
Copula Theory and its Applications
8-9, Feb 2017

An extension of bivariate Marshall-Olkin distribution

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Abstract

A new method to construct an extension of Marshall-Olkin distributions has been proposed, with extending their dependence structure and tail dependence, making it more flexible for modelling, followed by a statistical interpretation resulting stochastic comparison. Some properties of this model such as association measures, tail dependence, Kendall distribution and invariancy followed by an applicable example has been presented. finally, the multivariate extension of the Marshall-Olkin model has been proposed.

Keywords: Copula, Copula transformation, Dependence measures, Marshall-Olkin model, Stochastic orders

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