

Transformations of Copulas and Measures of Concordance

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Abstract

We study a group of transformations mapping the collection of all copulas into itself. For every copula, they generate a variety of new copulas; this is of particular interest with regard to asymmetric copulas and may also be useful for proving that certain real functions on the unit square are indeed copulas. Some of these transformations turn out to preserve symmetry, the order between two copulas and the value of every measure of concordance, while others do not. In addition, the group provides a simple condition on copulas under which every measure of concordance of the copula is equal to zero.

Keywords: copulas, transformations, symmetry, order, measures of concordance

References

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