

A Dual Measure of Uncertainty: The Deng Extropy [†]

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Lad, Sanfilippo and Agrò (2015) introduced the extropy as the dual concept of entropy. This measure of uncertainty has attracted the interest of researchers, and several versions of the extropy have been studied in the literature. Moreover, in the context of the Dempster–Shafer theory of evidence, Deng studied a new measure of discrimination, named the Deng entropy. In this talk, we define the Deng extropy and study its relation with Deng entropy, and examples are proposed in order to compare them. The behaviour of Deng extropy is studied under changes of focal elements. A characterization result is given for the maximum Deng extropy and, finally, a numerical example in pattern recognition is discussed in order to highlight the relevance of the new measure.

References

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