Entropy of T-sums and T-products of L-R Fuzzy Numbers.

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Abstract: In the paper the entropy of L–R fuzzy numbers is studied. It is shown that for a given norm function, the computation of the entropy of L–R fuzzy numbers reduces to using a simple formula which depends only on the spreads and shape functions of incoming numbers. In detail the entropy of T_M–sums and T_M–products of L–R fuzzy numbers is investigated. It is shown that the resulting entropy can be computed only by means of the entropy of incoming fuzzy numbers or by means of their parameters without the computation of membership functions of corresponding sums or products. Moreover, the results for some other t-norm–based sums and products are derived. Several examples are included.

Keywords: