

# On the Migrativity of Fuzzy Implication Functions

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**Abstract.** Research on multi-valued fuzzy connectives, including fuzzy implication functions, often involves analyzing various functional equations (cf. [1]). Examples of such equations are the distributivity of fuzzy implications over different fuzzy logic connectives, the law of importation, the  $T$ -conditionality, and the equation satisfied by the special fuzzy implications. One such equation is also the migrativity property, initially studied in the context of triangular norms. It was found that this property is very useful in convex combination construction and analytic characterization of new fuzzy logic connectives and, particularly, has potential applications in image processing. Recently, in [2], we have proposed and investigated a meaningful generalization of the laws of migrativity to fuzzy implication functions, which led us to two generalized versions of the law of importation. In 2023, in [4], the authors analyzed the migrativity of  $t$ -conorms over fuzzy implications, which was firstly proposed in [2]. In our presentation, we will discuss recent results connected with the migrativity of fuzzy implications, particularly those presented in [3] and [5].

**Keywords:** Fuzzy connectives · Fuzzy Implications · Migrativity · Triangular Norms

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