NON-CONTINUOUS ADDITIVE GENERATORS OF TRIANGULAR NORMS

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The construction of triangular norms by means of additive generators is based on Abel's idea (see [1]). Ling [2] characterized continuous Archimedean t-norms as t-norms generated by a continuous additive generator. In the framework of t-norms a lot of generalizations of this construction method have been made (see [3], [4] and [5]). One of the most general sufficient condition of associativity of a generated function is a relatively closed range of its additive generator under addition. The first example of an additive generator of a triangular norm whose range is not relatively closed under addition was introduced in [6]. Since then additive generators of triangular norms with an infinite set of discontinuity points have been constructed (see [7]). The characterization of all generated t-norms (or all additive generators of t-norms) is still an open problem.

The aim of this work is to bring a characterization of additive generators of t-norms which are left continuous at point 1. Finally, some algebraic properties of generated t-norms which are continuous at point $(1, 1)$ are discussed.

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