

Approximation of fuzzy numbers

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Abstract

This work deals with a general constructive method for approximating a fuzzy number, which uses Schauder bases in suitable Banach spaces and extends the more recent approximations such as those obtained in terms of polygonal fuzzy numbers or simple fuzzy numbers. We state the convergence of the general method and study the properties of the approximation related to the arithmetic operations of the fuzzy numbers and their characteristics. We provide some simple algorithms in some particularly interesting cases.

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