

A Fuzzy Ranking Method By The Centers Of Fuzzy Set

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Abstract

Two homomorphic mappings, taking each bounded fuzzy set as an element of the domain and the center of this fuzzy set as its image, will be derived in this paper. Since the range is defined on the real number, we can use them as the indexes for fuzzy number comparison. And in order to deal with the output data of some fuzzy arithmetic methods, the numerical comparison methods on calculating the fuzzy number representing in a series of α -level sets are also proposed. Furthermore, some properties will also be derived on those mappings if we restrict the domain on symmetric fuzzy numbers.

Keywords: Fuzzy Arithmetic, Ranking Fuzzy Numbers, Comparison Functions.