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The result of arithmetic operations applied on general quadratic fuzzy sets

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Abstract. A general quadratic fuzzy set is a quadratic fuzzy set that may not have maximum value 1. We calculated the Zadeh's max-min composition operator for two general quadratic fuzzy sets. By using parametric operations between two α -cuts which are regions, we generalized the general quadratic fuzzy sets from \mathbb{R} to \mathbb{R}^2 and calculated the parametric operations for two generalized 2-dimensional quadratic fuzzy sets.

We show that the parametric operations for two generalized quadratic fuzzy sets defined on \mathbb{R}^2 is a generalization of a Zadeh's max-min composition operations for two general quadratic fuzzy sets defined on \mathbb{R} .

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