

FUZZY INTERIOR IDEALS IN HYPERSEMIGROUPS

NIOVI KEHAYOPULU

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Abstract

We introduce the concept of interior ideal and the concept of fuzzy interior ideal in hypersemigroups and we prove, among others, that in regular also in intra-regular hypersemigroups the interior ideals and the fuzzy interior ideals coincide. We also prove that an hypergroupoid H is simple if and only if every fuzzy ideal of H is a constant function; and that an hypersemigroup H is simple if and only if every fuzzy interior ideal of H is a constant function, equivalently if, for every element a of H , we have $H = H * \{a\} * H$.

Key words and Phrases. Hypersemigroup, interior ideal, fuzzy interior ideal, right (left) ideal, ideal, fuzzy right (left) ideal, fuzzy ideal, regular, intra-regular, simple, fuzzy simple.