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A study of stabilizers in triangle algebras. (English) Zbl 06842062

Summary: In this paper, we introduce the notions of stabilizer of a subset and the stabilizer of a subset with respect to another one in triangle algebras and study them in details. It is shown that the stabilizer of a subset and stabilizer of an interval valued residuated lattice filter (IVRL-filter) with respect to another IVRL-filter are IVRL-filters. We state and prove some theorems which determine some properties of this stabilizers in triangle algebras. Also, we prove that in linearly ordered triangle algebras, stabilizer of a set is an IVRL-extended prime filter. Finally, we consider the influence of stabilizers on product and quotient triangle algebras.

MSC:
08A30 Subalgebras, congruence relations
08A72 Fuzzy algebraic structures
03B50 Many-valued logic
03B52 Fuzzy logic; logic of vagueness
03G25 Other algebras related to logic

Keywords:
non-classical logics; triangle algebra; stabilizer; IVRL-filter; interval-valued structures

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References:
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