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Some types of falling fuzzy filters of BL-algebras and its applications. (English)

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Summary: The notions of falling fuzzy (implicative, positive implicative and fantastic) filters of a BL-algebra are introduced based on the theory of falling shadows and fuzzy sets. The relations between fuzzy (implicative, positive implicative and fantastic) filters and falling fuzzy (implicative, positive implicative and fantastic) filters are provided. Finally, we apply the concept of falling fuzzy inference relations to BL-algebras and obtain some related results.

MSC:

03G25 Other algebras related to logic
03B52 Fuzzy logic; logic of vagueness
06D35 MV-algebras

Keywords:
falling shadow; fuzzy filter; falling fuzzy filter; falling fuzzy inference relation

Full Text: DOI