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Interval-valued fuzzifications of subalgebras in BCH-algebras. (English) Zbl 0995.06008

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A BCH-algebra is a binary groupoid G with a fixed element 0 such that the axioms $xx = 0$, $(xy)z = (xz)y$, $xy = yx = 0 \rightarrow x = y$ are satisfied.

A characterization of interval-valued fuzzy subalgebras of G is given and a method for constructing a new interval-valued fuzzy subalgebra from an old one is presented. The images and inverse images of such fuzzy subalgebras are studied too.

Reviewer: [Wiesław A. Dudek \(Wrocław\)](#)

MSC:

06F35 BCK-algebras, BCI-algebras (aspects of ordered structures)

Keywords:

BCH-algebra; interval-valued fuzzy set