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A fuzzy version of Tarski's fixpoint theorem. (English) Zbl 1108.06008
Arch. Math., Brno 40, No. 3, 273-279 (2004).

The author establishes a fuzzy set version of Tarski's classical fixed-point theorem in a complete lattice. In particular, the following statement is proved:

Let (X, r) be a nonempty r -fuzzy complete lattice and let $f: X \rightarrow X$ be a r -fuzzy monotone map. Then the set $\text{Fix}(f)$ of all fixed points of f is a nonempty r -fuzzy complete lattice.

Definitions of all concepts appearing in the above theorem can be found in the reviewed paper.

Reviewer: [Ondřej Došlý \(Brno\)](#)

MSC:

- [06D72](#) Fuzzy lattices (soft algebras) and related topics
- [06B23](#) Complete lattices, completions
- [54H25](#) Fixed-point and coincidence theorems (topological aspects)

Cited in **1** Review
Cited in **3** Documents

Keywords:

[fuzzy set](#); [fuzzy order relation](#); [complete lattices](#)

Full Text: [EuDML](#) [EMIS](#)