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Fixed point theorems for cyclic contraction mappings in fuzzy metric spaces. (English)

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Summary: In the present paper, an extension of the Edelstein contraction theorem for cyclic contractions in a fuzzy metric space is established, which also can be considered as a generalization of the fuzzy Edelstein contraction theorem introduced by *M. Grabiec* [Fuzzy Sets Syst. 27, No. 3, 385–389 (1988; Zbl 0664.54032)]. Additionally, we extend a fixed point theorem in G -complete fuzzy metric spaces given by *Y.-H. Shen* et al. [Iran. J. Fuzzy Syst. 10, No. 4, 125–133 (2013; Zbl 1333.54050)] to M -complete fuzzy metric spaces. Two examples are constructed to illustrate the corresponding results, respectively.

MSC:

54H25 Fixed-point and coincidence theorems (topological aspects)

54A40 Fuzzy topology

54E40 Special maps on metric spaces

Cited in 3 Documents

Keywords:

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