Abstract

In this paper, we established fixed point theorems for two and three self-maps of a complete fuzzy 2-metric space. The contractive definition is a generalization of Hardy-Rogers and the commuting condition of Jungck is replaced by the concept of weakly commuting. The notion of relative asymptotic regularity of a sequence in a fuzzy 2-metric space is introduced and fixed point theorems for two and three self-mappings of a complete fuzzy 2-metric space is proved. Further, a result for a pair of weakly commuting mappings and relative asymptotically regular sequence is presented in complete fuzzy 2-metric space.

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**Index Terms**

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