A Note On-Weakly compatible mappings along with $CLR_S$ property in fuzzy metric spaces

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1 Main results

On critical examination of the results given in our paper [1], we notice one crucial error. We need to carry out the following correction:

Proof of Lemma 3.1 given in paper [1] is wrong as the existence of the limit $\lim_{n \to \infty} B(y_n)$ is not proved. It is proved only that, if this limit exists, then it must be equal to Sz.

It is not easy to overcome this problem. In order to recover Theorem 3.1, one should remove Lemma 3.1 and replace the assumption (i) from Theorem 3.1 by the stronger one: the pairs of mappings $(A, S)$ and $(B, T)$ satisfy the common property $(E.A.)$ and if at least one of these mappings has closed range, that the two pairs share the common limit in the respective range property.

Lemma 3.1 is also used in proving Corollary 3.2 (if it is said that each of the pairs $(A, S)$ and $(B, T)$ satisfies the common limit in the range of $S$ property).

Statements of Theorem 3.1

**Theorem 3.1.** Let $A, B, S$ and $T$ be self mappings of a fuzzy metric space $(X, M, *)$ satisfying inequality (3.1). Suppose that:

(i) the pairs of mappings $(A, S)$ and $(B, T)$ satisfy the common property $(E.A.)$,

(ii) at least one of $A(X)$ or $S(X)$ is a closed subspace of $X$.

Then the pairs $(A, S)$ and $(B, T)$ have a point of coincidence each. Moreover, $A, B, S$ and $T$ have a unique common fixed point provided that both the pairs $(A, S)$ and $(B, T)$ are weakly compatible.

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References


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