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COMMON FIXED POINT OF A SEQUENCE OF SELF-MAPS ON A G-METRIC SPACE

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Abstract

Let (X, G) be G-metric space. Given a positive integer k and a self-map g on X, suppose that $\langle f_i \rangle_{i=1}^{\infty}$ is a sequence of self-maps on X such that $f_{i+k} = f_i$ for all i. Given $x_0 \in X$ and a self-map g on X, we introduce a $(f_1, f_2, \ldots, f_k)$-*orbit* at x_0 relative to g. Using this, a generalization of recent result of Popa and Patriciu (2012) is established through weak compatibility and implicit relation.

Key Words and Phrases : *G-metric space, Orbit, Implicit relation, Weakly compatible mappings, Fixed point.*

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