

Approximating fixed points of generalized nonexpansive mappings in $CAT(k)$ spaces via modified S -iteration process

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Abstract In this paper, we approximate common fixed points of two generalized nonexpansive mappings under modified S -iteration process in complete $CAT(k)$ spaces and establish some Δ -convergence theorems. Our results generalize and improve the corresponding known results of the existing literature.

Keywords Δ -Convergence · S -Iteration process · Generalized nonexpansive mapping · Common fixed point · $CAT(k)$ space

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1 Introduction

Let (X, d) be a metric space and K a nonempty subset of X . A mapping $T : K \rightarrow K$ is said to be nonexpansive if $d(Tx, Ty) \leq d(x, y) \forall x, y \in K$. An element $x \in K$ is said to be a fixed point of T if $Tx = x$. The set of all fixed points of T is often denoted by $F(T)$.

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