Monotone operators and the proximal point algorithm in $CAT(0)$ spaces

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Abstract: In this paper, by using products of finitely many resolvents of monotone operators, we propose an iterative algorithm for finding a common zero of a finite family of monotone operators and a common fixed point of a finite family of nonexpansive mappings in $CAT(0)$ spaces. We derive the strong convergence of the proposed algorithm under appropriate conditions.

Keywords: Proximal point algorithm, $CAT(0)$ spaces, monotone operator

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