

STRONG CONVERGENCE OF AN INEXACT PROXIMAL POINT ALGORITHM IN HADAMARD SPACES

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Abstract. We study the strong convergence of the sequence generated by an inexact proximal point method with possible unbounded errors for finding zeros of monotone operators in Hadamard spaces. We show that the boundedness of the generated sequence is equivalent to the zero set of the operator to be nonempty. In this case, we prove the strong convergence of the generated sequence to a zero of the operator. We also provide some applications of our main results and give a numerical example to show the performance of the proposed algorithm.

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