

THE SHRINKING PROJECTION METHOD WITH ALLOWABLE RANGES FOR ZERO POINT PROBLEMS AND ITS APPLICATIONS

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ABSTRACT

In 2008, Takahashi, Takeuchi and Kubota [3] introduced the shrinking projection method which is an iterative method for finding a common fixed point of some families of nonlinear mappings in a Hilbert space. In the shrinking projection method, we need to obtain the exact value of the metric projection to generate a sequence in every step, and it is a task of difficulty. To solve this problem, in 2012, Kimura [1] presented the shrinking projection method with nonsummable errors in a geodesic space. Motivated by Kimura [1], in 2019, Takeuchi [2] proposed another method which is called the shrinking projection method with allowable ranges.

In this talk, we study the shrinking projection method with allowable ranges introduced by Takeuchi [2] for the zero point problem. We obtain strong convergence theorems for finding a zero point of a maximal monotone operator in a Banach space. Moreover, using our results, we discuss the convex minimization problem.

REFERENCES

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