

THE SPLIT FIXED POINT PROBLEM FOR DEMICONTRACTIVE MAPPINGS AND APPLICATIONS

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Abstract. In this paper, we propose a new algorithm to approximate a split common fixed point problem for two demicontractive mappings and prove strong convergence of the proposed method in real Hilbert spaces. As the application, we apply our main results to study the split common null point problem, split variational inequality problem, split convex minimization problem and split equilibrium problem in frame work of real Hilbert spaces. Some numerical example supporting our main result is also given.

Key Words and Phrases: Fixed point problem, minimization problem, variational inequality problem, equilibrium problem, demicontractive mapping.

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