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A hybrid approximation method for equilibrium, variational inequality and fixed point problems

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ABSTRACT

The purpose of this paper is to present an iterative scheme by a hybrid method for finding a common element of the fixed points of ϕ-asymptotically nonexpansive mapping, the set of solutions of the equilibrium problem and the set of solutions of the variational inequality for an inverse strongly monotone operator in the framework of Banach spaces. We show that the iterative scheme converges strongly to a common element of the above three sets under appropriate conditions.