

**Title** EXISTENCE AND CONVERGENCE THEOREMS FOR  
SOME CLASSES OF GENERALIZED VARIATIONAL  
INEQUALITIES AND MIXED EQUILIBRIUM PROBLEMS

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### ABSTRACT

In this research, we introduce new iterative schemes for finding the solution of variational inequality problems, variational inclusions problems and equilibrium problems and we prove existence theorems of these problems. We establish the following results. Firstly, we study a generalized system of nonlinear variational inequalities in Banach space. Secondly, we study existence of solutions for generalized variational inequality problems in Banach spaces. Thirdly, we study system of nonlinear set-valued variational inclusions involving a finite family of  $H(\cdot, \cdot)$ -accretive operators in Banach spaces. Finally, we study existence and algorithm for generalized mixed equilibrium problem with a relaxed monotone mapping.