

## PERTURBED ALGORITHM AND STABILITY FOR STRONGLY NONLINEAR QUASI-VARIATIONAL INCLUSION INVOLVING $H$ -ACCRETIVE OPERATORS

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*Abstract.* In this paper, a new class of strongly nonlinear quasi-variational inclusions involving  $H$ -accretive operator in Banach spaces is studied, which includes many variational inequality(inclusion) and complementarity problems as special cases. By using the resolvent operator technique for  $H$ -accretive operator due to Fang and Huang, an existence and uniqueness theorem of solution for strongly nonlinear quasi-variational inclusion is proved. A new perturbed algorithm for finding approximate solution of the strongly nonlinear quasi-variational inclusion is suggested and discussed, the convergence and stability of the iterative sequence generated by new perturbed algorithm is also given. The results presented in this paper improve and generalize some recent results in this field.

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