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New Perturbed Iterations for a Generalized Class of Strongly Nonlinear Operator Inclusion Problems in Banach Spaces

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Abstract: The purpose of this paper is to introduce and study a new kind of generalized strongly nonlinear operator inclusion problems involving generalized m -accretive mapping in Banach spaces. By using the resolvent operator technique for generalized m -accretive mapping due to Huang and Fang, we also prove the existence theorem of the solution for this kind of operator inclusion problems and construct a new class of perturbed iterative algorithm with mixed errors for solving this kind of generalized strongly nonlinear operator inclusion problems in Banach spaces. Further, we discuss the convergence and stability of the iterative sequence generated by the perturbed algorithm. Our results improve and generalize the corresponding results of [3,6,11,12].



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