Abstract

We study a perturbation-resilient iterative method with an infinite pool of operators having a property, which allows using discontinuous operators, weaker than paracontracting. A convergence result is given under an extra condition which is inherently present in some state-of-the-art iterative methods. To evaluate the study, we develop a new algorithmic scheme which generalizes both the string-averaging algorithm and the block-iterative projection methods, and give its convergence analysis for the consistent case.