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Abstract

We study error minimizing relaxation (EMR) strategies for use in Landweber and Kaczmarz type iterations applied to linear systems with or without convex constraints. Convergence results based on operator theory are given, assuming exact data. The advantages and disadvantages of these relaxation strategies on a noisy and ill-posed problem are illustrated using examples taken from the field of image reconstruction from projections. We also consider combining EMR with penalization.