

# Enhancing the convergence of iterative solvers by incorporating ideas from approximate inverse preconditioning

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## Abstract

The effectiveness of the use of approximate inverse preconditioners in the solution of linear systems has been demonstrated. In this talk we explore the use of approximate inverse ideas to define certain operators in algebraic multigrid methods. Using numerical examples, we illustrate resulting improved convergence rates of such methods on difficult test problems.

*Key words:* solvers, approximate inverse preconditioners, algebraic multigrid

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