

AN ADAPTIVE NONMONOTONIC TRUST REGION METHOD WITH CURVILINEAR SEARCHES

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摘要

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AN ADAPTIVE NONMONOTONIC TRUST REGION METHOD WITH CURVILINEAR SEARCHES

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Abstract In this paper, an algorithm for unconstrained optimization that employs both trust region techniques and curvilinear searches is proposed. At every iteration, we solve the trust region subproblem whose radius is generated adaptively only once. Nonmonotonic backtracking curvilinear searches are performed when the solution of the subproblem is unacceptable. The global convergence and fast local convergence rate of the proposed algorithms are established under some reasonable conditions. The results of numerical experiments are reported to show the effectiveness of the proposed algorithms.

Key words [Unconstrained optimization](#) [Preconditioned gradient path](#) [Trust region method](#) [Curvilinear search](#).

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