Journal of Computational Mathematics 2005 23 (2): ISSN: 0583-1431 CN: 11-1914/R

A Revised Conjugate Gradient Projection Algorithm for Inequality Constrained Optimizations

收稿日期 修回日期 网络版发布日期 接受日期

摘要
关键词

分类号

A Revised Conjugate Gradient Projection Algorithm for Inequality Constrained Optimizations

Wei Wang (1), Lian-sheng Zhang (2), Yi-fan Xu (3)

Abstract A revised conjugate gradient projection method for nonlinear inequality constrained optimization problems is proposed in the paper, since the search direction is the combination of the conjugate projection gradient and the quasi-Newton direction. It has two merits. The one is that the amount of computation is lower because the gradient matrix only needs to be computed one time at each iteration. The other is that the algorithm is of global convergence and locally superlinear convergence without strict complementary condition under some mild assumptions. In addition the search direction is explicit.

Key words Constrained optimization Conjugate gradient projection Revised direction Superlinear convergence

DOI:

通讯作者