Journal of Systems Science and Complexity 1995 8 (3): 193-202 ISSN: 1000-0577 CN: 11-2019/O1

论文

A SUPERLINEAR CONVERGENT FEASIBLE METHOD FOR NONLINEAR PROGRAMMING WITH NONLINEAR CONSTRAINTS

GAO Ziyou(1), HE Guoping(1),LIU Rengkui(2)

(1)Institute of Applied Mathematics, Academia Sinica, Beijing 100080,China;(2)Northern Jiaotong University, Beijing 100044, China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 A new feasible algorithm is proposed for the minimization of a continuously differentiable function subject to inequality constraints. This algorithm only needs to solve one quadratic programming subproblem at each iteration and can produce feasible successive iterates which have global convergence and local superlinear convergence under some suitable assumptions. Some numerical results are reported.

关键词 Constrained optimization, successive qua

分类号

A SUPERLINEAR CONVERGENT FEASIBLE METHOD FOR NONLINEAR PROGRAMMING WITH NONLINEAR CONSTRAINTS

GAO Ziyou(1), HE Guoping(1),LIU Rengkui(2)

(1)Institute of Applied Mathematics, Academia Sinica, Beijing 100080,China;(2)Northern Jiaotong University, Beijing 100044, China

Abstract A new feasible algorithm is proposed for the minimization of a continuously differentiable function subject to inequality constraints. This algorithm only needs to solve one quadratic programming subproblem at each iteration and can produce feasible successive iterates which have global convergence and local superlinear convergence under some suitable assumptions. Some numerical results are reported.

Key words Constrained optimization successive quadratic programming feasibility superlinear convergence.

DOI:

通讯作者