

A LQP BASED INTERIOR PREDICTION-CORRECTION METHOD FOR NONLINEAR COMPLEMENTARITY PROBLEMS

收稿日期 2004-9-8 修回日期 2005-7-18 网络版发布日期 接受日期

摘要

关键词

分类号

A LQP BASED INTERIOR PREDICTION-CORRECTION METHOD FOR NONLINEAR COMPLEMENTARITY PROBLEMS

Bing-sheng He(1), Li-zhi Liao(2), Xiao-ming Yuan(3)

(1)Department of Mathematics, Nanjing University, Nanjing 210093, China; (2) Department of Mathematics, Hong Kong Baptist University, Hong Kong, China; (3) Department of Mathematics, City University of Hong Kong, Hong Kong, China

Abstract To solve nonlinear complementarity problems (NCP), at each iteration, the classical proximal point algorithm solves a well-conditioned sub-NCP while the Logarithmic-Quadratic Proximal (LQP) method solves a system of nonlinear equations (the LQP system). This paper presents a practical LQP method-based prediction-correction method for NCP. The predictor is obtained via solving the LQP system approximately under significantly relaxed restriction, and the new iterate (the corrector) is computed directly by an explicit formula derived from the original LQP method. The implementations are very easy to be carried out. Global convergence of the method is proved under the same mild assumptions as the original LQP method. Finally, numerical results for traffic equilibrium problems are provided to verify that the method is effective for some practical problems.

Key words [Logarithmic-Quadratic proximal method](#) [Nonlinear complementarity problems](#) [Prediction-correction](#) [Inexact criterion](#)

DOI:

通讯作者

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(0KB\)](#)

▶ [HTML全文\(0KB\)](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 无 相关文章](#)

▶ [本文作者相关文章](#)