数学与系统科学研究院

计算数学所博士后定期学术报告

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报告题目：

Optimality Conditions and Numerical Algorithms for A Class of Linearly Constrained Minimax Optimization Problems

报告时间：**2022** 年 **11** 月 **9** 日（周三）

下午 **16:00-17:00**

报告地点：科技综合楼

301 教室

Abstract:

It is well known that there have been many numerical algorithms for solving nonsmooth minimax problems, numerical algorithms for nonsmooth minimax problems with joint linear constraints are very rare. This paper aims to discuss optimality conditions and develop practical numerical algorithms for minimax problems with joint linear constraints. First of all, we use the properties of proximal mapping and KKT system to establish optimality conditions. Secondly, we propose a framework of alternating coordinate algorithm for the minimax problem and analyze its convergence properties. Thirdly, we develop a proximal gradient multi-step ascent decent method (PGmsAD) as a numerical algorithm and demonstrate that the method can find an $\epslion$-stationary point for this kind of nonsmooth problem in ${\cal O}\left(\epsilon^{-2}\log \epsilon^{-1} \right)$ iterations. Finally, we apply PGmsAD to generalized absolute value equations, generalized linear projection equations and linear regression problems and report the efficiency of PGmsAD on large-scale optimization.

欢迎大家参加！