

数学与系统科学研究院

计算数学所学术报告

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报告题目:

Global Convergence of ADMM for Solving Nonconvex Optimization Problems

邀请人: 刘歆 副研究员

报告时间: 2018 年 12 月 14 日(周五)

上午 9:00-10:00

报告地点: 科技综合楼三层

311 报告厅

Abstract:

In this paper, we propose a symmetric alternating method of multipliers for minimizing the sum of two nonconvex functions with linear constraints, which contains the classic alternating direction method of multipliers in the algorithm framework. Based on the powerful Kurdyka–Łojasiewicz property, and under some assumptions about the penalty parameter and objective function, we prove that each bounded sequence generated by the proposed method globally converges to a critical point of the augmented Lagrangian function associated with the given problem. Moreover, we report some preliminary numerical results on solving $L_{1/2}$ regularized sparsity optimization and nonconvex feasibility problems to indicate the feasibility and effectiveness of the proposed method.

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