数学与系统科学研究院

计算数学所博士后定期学术报告

报告人： Dr. Jinyu Dai

（ Institute of Computational Mathematics and Scientific/Engineering Computing, CAS ）

报告题目：

Globally solving the extended trust region subproblem using the strengthened SDP relaxations

报告时间：2019 年 12 月 11 日（周三）

下午 16:00-17:00

报告地点： 科技综合楼三层

311 报告厅

Abstract：

In this talk, we will discuss several methods of globally solving the extended trust region subproblem (eTRS) by the strengthened SDP relaxations. Using the newly developed technique---second order cone (SOC) constraints, we derive a strengthened SDP (SOC-SDP) relaxation of (eTRS), two recent SDP relaxation based algorithms for solving eTRS are modified by the SOC-SDP relaxation accordingly. In addition, we give a class of eTRS that the SDP relaxation strengthened by RLT constraints has significant advantages than SOC constraints from the aspect of computation. Numerical experiments are taken out to test the efficiencies of the branch and bound algorithms adopting different strengthened SDP relaxations. It shows that the new algorithms outperform the SDP relaxation based algorithms for certain type of eTRS.

欢迎大家参加！