

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:

**Methods for Special Structured  
Quadratic Constrained Quadratic  
Programmings**

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报告时间: **2014 年 2 月 18 日 (周二)**

**下午 15:30**

报告地点: **科技综合楼三层 311**

**计算数学所报告厅**

## **Abstract:**

We would like to consider a kind of quadratic constrained quadratic programmings (QCQP) with special structures. These problems come from the sum rate maximization problems in MIMO-relay wireless communication systems. The QCQP problems are with nonconvex objective functions while the constraints have only positive definite second-order terms. We first approximate the QCQP problem as a series of trust region subproblems, and achieve a feasible solution of QCQP. This point acts as the starting point of the Sequential Quadratic Programming (SQP) method. With discussion of nonconvex subproblems in SQP, we are able to achieve a stationary point of the QCQP problem. Such methods allow us to solve these QCQP problems with low complexity and achieve considerable solutions.

欢迎大家参加!