# 数学与系统科学研究院

## 计算数学所学术报告

**报告人**： **Prof. Jiawang Nie**

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**报告题目**：

# Semidefinite Programming Methods for Multivariate Polynomial Optimization

**邀请人**： 袁亚湘研究员

**报告时间**：2011 年 9 月 23 日（周五）

上午 10：00-11：00

**报告地点**： 科技综合楼三层 301

计算数学所小报告厅

**Abstract**：

**This talk presents the latest status in the area of solving multivariate polynomial optimization problems globally by using semidefinite programming (SDP) and sum of squares (SOS) techniques. First, we review the hiearchy of Lasserre's SDP relaxations. Second, we introduce the theory of sum of squares, including Hilbert's 17th Problem, Positivstellensatz and representation of positive polynomials. Third, we give the duality theory and convergence results. Last, we present the most recent achievements in the area, as well as future work.**

欢迎大家参加!