

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Man-Cho Anthony So**

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报告题目:

**On Safe Tractable Approximations of
Chance Constrained Linear Matrix
Inequalities with Partly Dependent P
erturbations**

邀请人: 戴彧虹研究员

报告时间: **2011 年 8 月 1 日 (周一)**

下午 14: 00-15: 00

报告地点: 科技综合楼三层 **311**

计算数学所报告厅

Abstract:

In recent years, there has been significant progress in using convex optimization techniques to deal with uncertainties in the data of an optimization problem. One of the successes is the development of so-called safe tractable approximations of chance constrained programs, where a probabilistic constraint is replaced by an efficiently computable convex constraint whose validity implies the validity of the former. Currently, such an approach mainly applies to problems where the data perturbations are independent. However, in some applications, the data perturbations are not independent, and so existing results cannot be applied. In this talk, we will demonstrate how tools from probability theory can be used to develop safe tractable approximations of chance constrained programs with dependent data perturbations. An advantage of our approach is that the resulting safe tractable approximations can be formulated as SDPs or even SOCPs, thus allowing them to be solved easily by off-the-shelf solvers. If time permits, we will also discuss some applications of our approach.

欢迎大家参加!