数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Shuzhong Zhang

（ *Department of Industrial and Systems Engineering, University of Minnesota* ）

报告题目：

Noisy Black Box Optimization: Algorithms and Effort Analysis

邀请人： 刘亚锋 博士

报告时间：2017 年 6 月 22 日（周四）

上午 10:00-11:00

报告地点： 科技综合楼三层

301 小报告厅

Abstract:

In this talk we present a computational complexity analysis for optimization problems where the objective function value can only be estimated with errors at any decision point. In particular, we study two different settings. In the first setting, the model is basically stochastic programming, but only one sample is taken at each decision point. In the second setting, the objective value can be estimated arbitrarily close to the true value, but at a cost that is increasing with regard to the inverse of the precision desired. Furthermore, we discuss extensions of the analysis to a general constrained model with a composite objective function, consisting of the vague objective and a non-smooth regularizer.

Bio sketch:

Shuzhong Zhang is Professor and Head of Department of Industrial and System Engineering, University of Minnesota. He received a B.Sc. degree in Applied Mathematics from Fudan University in 1984, and a Ph.D degree in Operations Research and Econometrics from the Tinbergen Institute, Erasmus University, in 1991. He had held faculty positions at Department of Econometrics, University of Groningen (1991-1993), and Econometric Institute, Erasmus University (1993-1999), and Department of Systems Engineering & Engineering Management, The Chinese University of Hong Kong (1999-2010). He received the Erasmus University Research Prize in 1999, the CUHK Vice-Chancellor Exemplary Teaching Award in 2001, the SIAM Outstanding Paper Prize in 2003, the IEEE Signal Processing Society Best Paper Award in 2010, and the 2015 SPS Signal Processing Magazine Best Paper Award. Dr. Zhang was an elected Council Member at Large of the MPS (Mathematical Programming Society) (2006-2009), and served as Vice-President of the Operations Research Society of China (ORSC) (2008-2012). He serves on the Editorial Board of several academic journals, including Operations Research, and Management Science.

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