

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Zhening Li**

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报告题目:

**Optimizing the Core Tensor in
Tucker Decomposition: Models and
Algorithms**

邀请人: 刘歆 副研究员

报告时间: 2019 年 7 月 26 日 (周五)

下午 16:00-17:00

报告地点: 科技综合楼三层

311 报告厅

Abstract:

Approximating high order tensors by low Tucker-rank tensors have applications in psychometrics, chemometrics, computer vision, biomedical informatics, among others. Traditionally, solution methods for finding a low Tucker-rank approximation presume that the size of the core tensor is specified in advance, which may not be a realistic assumption in many applications. In this paper we propose a new computational model where the configuration and the size of the core become a part of the decisions to be optimized. Our approach is based on the so-called maximum block improvement method for non-convex block optimization. Numerical tests on various real data sets from gene expression analysis and image compression are reported, which show promising performances of the proposed algorithms.

欢迎大家参加！