

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Liqun Qi**

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报告题目:

**Eigenvalues of Tensors and Their
Applications**

邀请人: 石钟慈院士

报告时间: **2010年8月11日(周三)**

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:

We are stepping to a new territory of applied mathematics. We are developing computational multilinear algebraic methods for higher-order tensors, which are parallel to the matrix theory. We are studying mathematical properties of tensors, such as eigenvalues and characteristic polynomials of tensors, tensor decomposition and tensor approximation, etc. The new subject has found applications and links from data analysis, automatic control, magnetic resonance imaging, optimization, solid mechanics, quantum physics, higher order Markov chains, spectral hypergraph theory, Finsler geometry and relativity theory, etc. Recently, linear convergence has been established for algorithms for finding the largest eigenvalue of a nonnegative tensor. Further serious exploration on these aspects is needed. I hope that more researchers will join us to explore this new field.

欢迎大家参加!