

数学与系统科学研究院

计算数学所学术报告

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报告题目:

**On Cones of Nonnegative Quartic
Forms**

邀请人: 刘歆 博士

报告时间: **2014 年 8 月 31 日 (周日)**

下午 14:30-15:30

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

In this talk we study the class of nonnegative polynomials. Six fundamentally important convex cones of nonnegative quartic functions will be presented. It turns out that these convex cones coagulate into a chain in decreasing order. The complexity status of these cones is sorted out as well. We further consider the polynomial sized representation of a very specific nonnegative polynomial, and this representation enables us to address an open question asserting that the computation of the matrix $2 \rightarrow 4$ norm is NP-hard in general.

欢迎大家参加!