


复旦大学数学科学学院
数学综合报告会

报告题目：Toric manifolds and PL spheres

报告人：Prof. Suyoung Choi (Ajou University)

时间：2026-04-16 星期四 15:40-16:40

地点：光华楼东主楼2001

报告摘要：

The classification of complete non-singular toric varieties with small Picard numbers is a fundamental problem in toric geometry. Kleinschmidt completed the classification for Picard number 2 in 1988, followed by Batyrev's extension to Picard number 3 in 1991. Continuing this line of work, we provide a complete classification for Picard number 4. A key ingredient in our approach is the notion of toric colorability, which involves assigning linearly independent vectors in $\mathbb{Z}_2^n$ to the vertices of a simplicial sphere of dimension $n-1$. This combinatorial condition plays a central role in understanding the possible underlying spaces of fans, and thus in the classification of toric manifolds.

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