



复旦大学数学科学学院 数学综合报告会

报告题目: Smooth solutions to the Christoffel problem in hyperbolic space

报告人: 陈立 (湖北大学)

时间: 2025-05-13 星期二 09:30-10:30

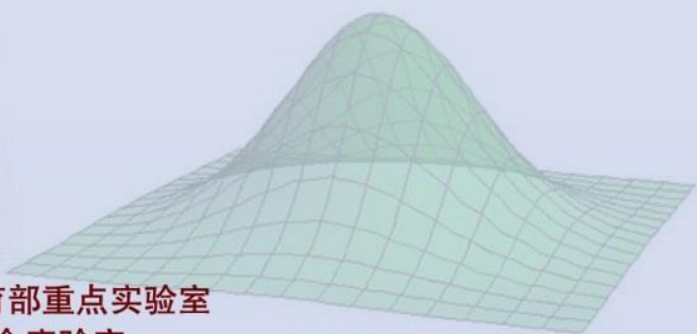
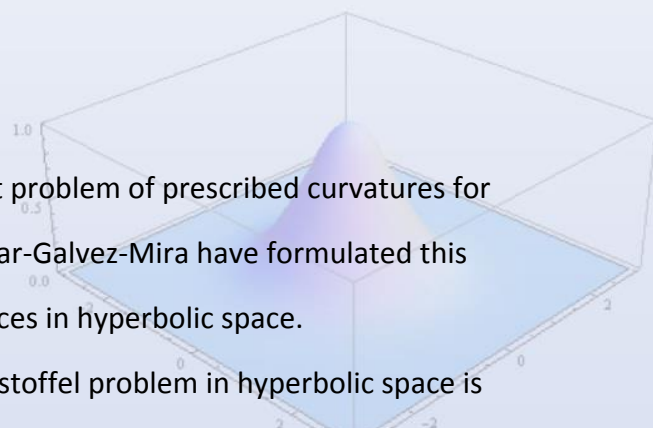
地点: 光华楼东主楼 2001

报告摘要:

The famous Christoffel problem is possibly the oldest problem of prescribed curvatures for convex hypersurfaces in Euclidean space. Recently, Espinar-Gálvez-Mira have formulated this problem in the context of uniformly h -convex hypersurfaces in hyperbolic space.

Surprisingly, Espinar-Gálvez-Mira found that the Christoffel problem in hyperbolic space is essentially equivalent to the Nirenberg problem on prescribed scalar curvature on the unit sphere. This equivalence provides a new approach to the Nirenberg problem.

In this talk, we will establish a existence of solutions to the Christoffel problem in hyperbolic space by proving a full rank theorem . As a corollary, a new existence result for the Nirenberg problem is obtained.



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