复旦大学数学科学学院
数学综合报告会

报告题目：On the asymptotic Plateau problem for hypersurfaces of constant scalar curvature in hyperbolic space

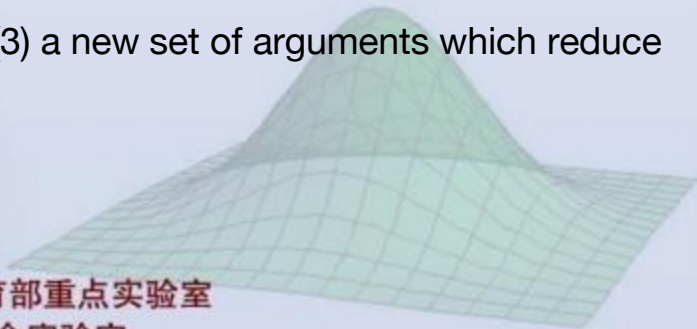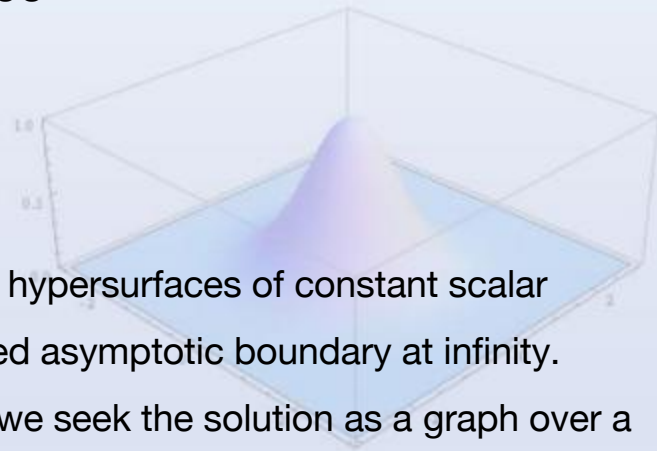报告人：王斌 博士(The Chinese University of Hong Kong)

时间：2024-08-15 星期四 14:00-15:00

地点：光华楼东主楼 2001

报告摘要：

We prove the existence of a smooth complete hypersurfaces of constant scalar curvature in hyperbolic space, with a prescribed asymptotic boundary at infinity. Following a pioneering work of Guan-Spruck, we seek the solution as a graph over a bounded domain and solve the corresponding Dirichlet problem by establishing the crucial second order estimates for admissible solutions.

Our proof consists of three main ingredients: (1) a new test function, (2) the almost-Jacobi inequality due to Shankar-Yuan, and (3) a new set of arguments which reduce the situation to semi-convex case.

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