


复旦大学数学科学学院
数学综合报告会

报告题目：High dimensional probability and quantities arises from large random structures

报告人：黄瀚 （ Georgia Institute of Technology）

时间：2022-01-14 星期五 13:30—14:10

地点：复旦大学光华楼东主楼2201室、腾讯会议755107231

报告摘要：

Abstract: Many important quantities in large random structures exhibit a strong concentration phenomenon. However, applying a general concentration inequality usually cannot derive meaningful results because often such quantities are difficult to express as a function of the structures. For example, the rank of a random matrix is difficult to be expressed as a function of its entries and may be challenging to analyze.

To determine and quantify such a phenomenon, one needs to observe from the insights of the random structures and find some crucial events in which sharp non-asymptomatic estimates are obtainable. In this talk, we will discuss some works in these: the rank of random matrices, nodal domains of random graphs, reconstruct-ability of random graphs from its local structures, and the distribution of minimal distance for random linear codes, and a classical discrete convex geometry problem in which concentration of measure approach is useful.

非线性数学模型与方法教育部重点实验室
中法应用数学国际联合实验室
上海市现代应用数学重点实验室
复旦大学数学研究所