



复旦大学数学科学学院 数学综合报告会

报告题目: **Birth of a cut in a unitary random matrix model with a singular potential**

报告人: 代丹(香港城市大学)

报告时间: 2015-12-22 星期二 10:00-11:00

报告地点: 光华东主楼 1501

摘要: The study of eigenvalue distribution is one of the central problems in random matrix theory. The limiting eigenvalue distribution as the matrix size tends to infinity attracts a lot of research interest in the literature. In the unitary models, it is well-known that, when the potential is convex, the limiting eigenvalue distribution is supported on a single interval. If the convex property is lost, the limiting eigenvalue distribution is supported on several intervals in general. In this talk, we will discuss unitary random matrix ensembles in the critical regime where a new cut arises away from the original spectrum. While performing a double scaling limit, we obtain asymptotics of the correlation kernel by using the Riemann-Hilbert approach.

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