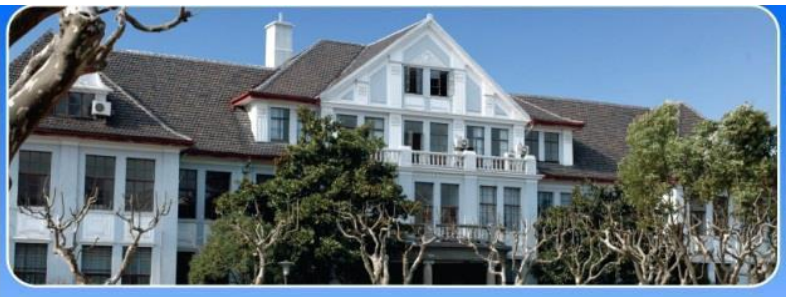


复旦大学数学科学学院
数学综合报告会

报告题目：One-point distribution of the geodesic in directed last passage percolation

报告人：刘志鹏 副教授（University of Kansas）

时间：2022-05-05 星期四 10:00--11:00

地点：腾讯会议 ID: 141-238-776

报告摘要：

In the recent twenty years, there has been a huge development in understanding the universal law behind a family of 2d random growth models, the so-called Kardar-Parisi-Zhang (KPZ) universality class. Especially, limiting distributions of the height functions are identified for a number of models in this class. On the other hand, different from the height functions, the geodesics of these models are much less understood. There were studies on the qualitative properties of the geodesics in the KPZ universality class very recently, but the precise limiting distributions of the geodesic locations remained unknown. In this talk, we will discuss our recent results on the one-point distribution of the geodesic of a representative model in the KPZ universality class, the directed last passage percolation with iid exponential weights. We will give an explicit formula of the one-point distribution of the geodesic location joint with the last passage times, and its limit when the parameters go to infinity under the KPZ scaling. The limiting distribution is believed to be universal for all the models in the KPZ universality class. We will further give some applications of our formulas.

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