



## 复旦大学数学科学学院 数学综合报告会

报告题目: The stochastic six-vertex model through the lens of integrable systems

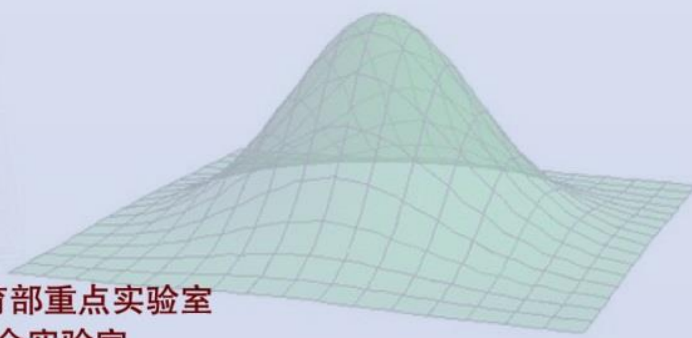
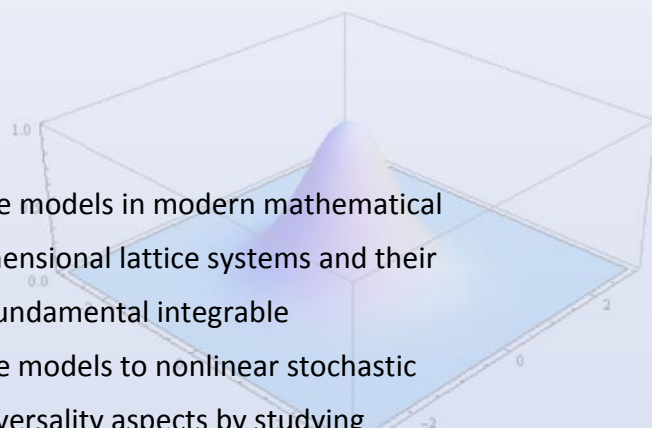
报告人: Guilherme Silva (巴西圣保罗大学)

时间: 2025-12-22 星期一 10:00-11:00

地点: 光华东主楼1601室

报告摘要:

The six-vertex model is one of the most ubiquitous lattice models in modern mathematical physics, serving as a cornerstone in the study of two-dimensional lattice systems and their phase transitions. Its stochastic version also provides a fundamental integrable representative of the KPZ universality class, linking lattice models to nonlinear stochastic growth phenomena. In this talk, we probe these KPZ universality aspects by studying moderate deviation regimes for its height function. The deviation estimates we will discuss are intimately connected with conditional thinning ensembles from random matrix theory, and nonlocal versions of the so-called Painlevé equations. The unraveling of such connections was a parallel task that we had to overcome, together with many other colleagues, and led to interesting phenomena that we hadn't anticipated with our original question.



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