



北京理工大学

数学与统计学院学术报告

On the gap between cluster dimensions of discrete and continuum loop soups in three dimensions

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摘要: “Loop Soup” is a classical statistical physics model, which has a deep connection with many other models, including Gaussian free fields, conformal loop ensembles, loop-erased random walks, uniform spanning trees, the FK-Ising model, etc. This talk will give an elementary introduction to this model, and present our recent result that the clusters of loop soups on \mathbb{R}^3 and the metric graph of \mathbb{Z}^3 have different fractal dimensions. This result corrects a key prediction in Wendelin Werner’s blueprint for the scaling limit of metric graph loop soups, and leads to a series of open questions. This is a joint work with Jian Ding (Peking University).

报告人简介: 蔡振豪，威兹曼科学研究所（数学与计算机科学学院）博士后，目前主要研究与随机游走相关的统计物理模型。