



Academic Presentations in Physics

物理学系列学术报告

报告题目: **Nested Closed Paths in Two-Dimensional Percolation**

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报告时间: **2023 年 3 月 16 日 (星期四) 14:30**

报告地点: 物理楼 852

报告摘要:

For two-dimensional percolation on a domain with the topology of a disc, we introduce a nested-path (NP) operator that counts the number of non-overlapping nested closed paths surrounding the center, and construct a continuous family of one-point functions. At criticality, we observe a power-law scaling of the functions and obtain a conjectured formula for the corresponding exponents. Moreover, we study the probability distribution of the nested paths and give the asymptotic critical behaviors. The predictions are well confirmed by our extensive Monte Carlo simulations for a number of critical percolation models.

报告人简介:

宋育峰, 中国科学技术大学博士研究生, 导师为邓友金教授和何院耀教授。2020 年本科毕业于中国科学技术大学, 2020 年至今在中国科学技术大学攻读博士学位。主要通过蒙特卡洛方法数值研究经典及量子模型中的相变与临界现象, 研究的模型包括 Potts 模型、刚性逾渗模型、Fermi-Hubbard 模型等等。

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