

北京师范大学 随机数学研究中心

学术报告

报告人: 丁剑 教授 (宾夕法尼亚大学)

题目: Long range order for random field Ising and Potts models

时间: 2021年10月11日 (周一) 下午3:40-4:40

地点: 教八-210

摘要: In this talk I will present a new and simple proof for the classic results of Imbrie (1985) and Bricmont-Kupiainen (1988) that for the random field Ising model in dimension three and above there is long range order at low temperatures with presence of weak disorder. With the same method, we obtain a couple of new results: (1) we prove that long range order exists for the random field Potts model at low temperatures with presence of weak disorder in dimension three and above; (2) we obtain a lower bound on the correlation length for the random field Ising model at low temperatures in dimension two (which matches the upper bound in Ding-Wirth (2020)). This is a joint work with Zijie Zhuang.