

概率论系列报告

报告题目 (Title): A lower bound for disconnection by
random interlacements

报告人 (Speaker): 李欣意 ETH Zürich

时间 (Time): 12月23日(周一)下午 3:00-4:00

地点 (Venue): 北京大学理科一号楼 1572

摘要 (Abstract): The talk will be divided into two parts. In the first part, we give a brief introduction to the model of random interlacements, introduced by A.-S. Sznitman in [Ann. Math. vol. 171, pp. 2039-2087]. Random interlacements can be intuitively regarded as the trace of a Poissonian “cloud” of doubly-infinite nearest-neighbour paths on certain weighted graphs, governed by an intensity parameter. The vacant set, defined as the complement of the interlacements, undergoes a non-trivial phase transition with respect to percolative properties. In the second part, we investigate the asymptotic behaviour of the probability that a large body gets disconnected from infinity by the random interlacements on \mathbb{Z}^d , $d \geq 3$, in the percolative regime for the vacant set. Motivated by an application of large deviation principles recently obtained in [arXiv:1304.7477] for the occupation-time profile of random interlacements, we derive an asymptotic lower bound, which brings into play a new version of random interlacements by which a stochastic “fence” is created to accomplish disconnection.

欢迎参加