



北京理工大学

数学与统计学院学术报告

Upper moderate deviation probabilities for the maximum of a branching random walk

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摘 要:

In 2013, Elie Aidékon obtained the convergence in distribution, as time goes to infinity, of the maximum of a supercritical branching random walk, once recentered by an explicit function $m(n)$. More recently, Lianghui Luo gave an asymptotic equivalent for the upper large deviation probabilities of this maximum. In this talk, I will present a joint work with Lianghui Luo in which we study an intermediate regime. We obtain an asymptotic equivalent for the probability that the maximum arrives at distance $x(n)$ above $m(n)$, where $1 \ll x(n) = O(\sqrt{n})$. As a byproduct, we obtain information about the typical behavior of particles contributing to such deviations.

个人简介: Louis Chataignier is a third-year PhD student at the Institut de Mathématiques de Toulouse, under the supervision of Michel Pain and Pascal Maillard. His research focuses on branching Brownian motion and branching random walks, with an emphasis on the asymptotic behavior of the front particles and the structure of their genealogy.