

北京师范大学随机数学研究中心学术报告

题目: On the minimal drift for recurrence in the frog model on d -ary trees

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时间: 2021年1月7日 (周四), 14:00-16:00

Zoom: 656 723 84630 (psw 123456)

摘要: We study the recurrence property of one-per-site frog model $FM(d, p)$ on a d -ary tree with drift parameter $p \in [0, 1]$, which determines the bias of frogs' random walks. In this model, active frogs move towards the root with probability p or otherwise moves to a uniformly chosen child vertex. Whenever a site is visited for first time, a new active frog is introduced at the site. In this talk, I will review some classic results regarding the recurrence of frog models on various graphs and then discuss our recently result on the universal and optimal bound for p_d for all $d \geq 2$, the minimal drift needed for the one-per-site frog model on d -ary trees to be recurrent. At the end of the talk, I will discuss a few open questions in the frog model.