

Tail estimates for the first passage time in the frog model

Naoki KUBOTA*(Nihon University)

We consider the frog model with random initial configurations. The dynamics of this model is as follows: Assign randomly simple random walks to sites of the multidimensional cubic lattice, and these simple random walks are regarded as “frogs.” Suppose that at least one frog exists at the origin. At first, only these frogs are active (the others are sleeping and do not move). When sleeping frogs are attacked by an active one, those become active and start moving.

A fundamental object of study is the first passage time at which an active frog reaches a site. In this talk, we present some tail estimates and deviation bounds for first passage times in the frog model.

*e-mail: kubota.naoki08@nihon-u.ac.jp