

Continuity result for the rate function of the simple random walk on supercritical percolation clusters

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We consider the simple random walk on supercritical percolation clusters in the multidimensional cubic lattice. In this model, a quenched large deviation principle holds for the position of the random walk. Its rate function depends on the law of the percolation configuration, and the aim of this paper is to study the continuity of the rate function in the law. To do this, it is useful that the rate function is expressed by the so-called Lyapunov exponent, which is the asymptotic cost paid by the random walk for traveling in a landscape of percolation configurations. In this talk, we present the continuities of the Lyapunov exponent and the rate function in the law of the percolation configuration.

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