

Erratic behavior for 1-dimensional random walks in generic quasi-periodic environment

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Sinai proved a localization phenomenon of recurrent one-dimensional nearest-neighbor random walk in random environment. On the other hand, he showed that if the medium is quasi-periodic and Diophantine then the walk behaves like a usual walk in constant medium. We show that one-dimensional random walks in a generic quasi-periodic environment environment have an erratic statistical behavior.