Mountford, Thomas S.

A note on limiting behaviour of disastrous environment exponents. (English) Zbl 0976.60093

Electron. J. Probab. 6, Paper No. 1, 10 p. (2001).

Summary: We consider a random walk on the d-dimensional lattice and investigate the asymptotic probability of the walk avoiding a "disaster" (points put down according to a regular Poisson process on space-time). We show that, given the Poisson process points, almost surely, the chance of surviving to time t is like $e^{-\alpha \log(1/k)t}$, as t tends to infinity if k, the jump rate of the random walk, is small.

MSC:

60K35	Interacting random processes; statistical mechanics type models; percolation theory	Cited in **5** Documents
60G50	Sums of independent random variables; random walks	
60G55	Point processes (e.g., Poisson, Cox, Hawkes processes)	

Keywords:

random walk; disaster point; Poisson process

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