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Abstracts of Short Communications and Posters

Section:

12. Probability and Statistics

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Siegmund-Schultze, Rainer

Level Crossing Probabilities for Random Walks

For an arbitrary one-dimensional random walk with independent increments we prove that the probability of crossing a level at a given time n is $O(n^{-1/2})$. Moment assumptions are not necessary to obtain this upper estimate. As an application, the result is used to prove a conjecture of Mauldin, Monticino and v. Weizsäcker (Adv. Math. 117(2) 1996, 239-252) about transience of directionally reinforced three-dimensional random walks.