

Lyapounov norms for random walks in a random potential and dimension greater than three.

Abstract : We consider a simple random walk on Z^d , $d > 3$. We also consider a collection of i.i.d. positive random variables $(V_\omega(x))_{x \in Z^d}$, which will serve as a random potential. We study the annealed and quenched cost to perform long crossing in the random potential $\lambda + V_\omega(x)$, where λ is positive constant. These costs are called Lyapounov norms and we will discuss the equality of the annealed and the quenched norm.