

Abstract

We consider the solution to a tight-binding, periodic Schrödinger equation with a random potential evolving stochastically in time. If the potential evolves according to a stationary Markov process we obtain a positive, finite diffusion constant for the evolution of the solution. More generally, we show that the square amplitude of the wave packet, after diffusive rescaling, converges to a solution of the heat equation. (Joint work with J. Schenker and Z. Tilocco).