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Yang Kang* (ykang@math.msu.edu), Department of Mathematics, Michigan State University, East Lansing, MI 48824, and **Jeffrey Schenker** and **Eman Hamza**. *Diffusive propagation of wave packets in a fluctuating periodic potential.*

We consider the evolution of a tight binding wave packet propagating in a fluctuating periodic potential. If the fluctuations stem from a stationary Markov process satisfying certain technical criteria, we show that the square amplitude of the wave packet, after diffusive rescaling, converges to a superposition of solutions of a heat equation. (Received January 25, 2010)