1145-35-1141   **Jeffrey Schenker**, **F Zak Tilocco** and **Shiwen Zhang*** (zhangshiwen@math.msu.edu).

Diffusion in the Mean for a Periodic Schrödinger Equation Perturbed by a Fluctuating Potential.

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. This work generalizes the previous results of Y. Kang and J. Schenker on the free Laplacian and J. Schenker on the Anderson model (Joint work with J. Schenker and F Zak Tilocco). (Received September 19, 2018)