1154-47-2272 **J Schenker** and **F Z Tilocco***, tiloccof@msu.edu, and **S Zhang**. *Diffusion in the mean for a periodic Schrödinger equation perturbed by a fluctuating potential.*

We consider the evolution of a quantum particle hopping on a cubic lattice in any dimension and subject to a potential consisting of a periodic part and a random part that fluctuates stochastically in time. If the random potential evolves according to a stationary Markov process, we obtain diffusive scaling for moments of the position displacement, with a diffusion constant that grows as the inverse square of the disorder strength at weak coupling. More generally, we show that a central limit theorem holds such that the square amplitude of the wave packet converges, after diffusive rescaling, to a solution of a heat equation.

Additionally, we will consider how the addition of a random, stochastically evolving, potential affects the transport properties of the one dimensional Dimer model. (Joint work with J. Schenker and S. Zhang) (Received September 17, 2019)