

**SPEAKER:**

Jeff Schenker, Michigan State University

**TITLE:**

Phonons, disorder and transport

**ABSTRACT:**

I will discuss the problem of transport of quantum particles in a disordered medium interacting with a phonon bath. Under some circumstances the interaction with the phonon bath can induce transport in a system that would otherwise be localized. This is something we can prove in the context of a Markovian master equation model. Under other circumstances, localization may persist even after the phonon interactions are turned on. (Joint work with Jrg Fröhlich and work in progress with Rajinder Mavi.)