SPEAKER:

Peter Hislop, University of Kentucky

TITLE:

Eigenvalue statistics for random Schrödinger operators

ABSTRACT:

Random Schrödinger operators model the propagation of noninteracting electrons in disordered media. The study of random Schrödinger operators combines the spectral theory of self-adjoint operators and probability theory. I'll review the basic spectral properties of these operators such as the deterministic spectrum and Anderson localization. Estimates for the eigenvalues of the corresponding Schrödinger operators restricted to finite regions, such as the Wegner and Minami estimates, will be presented. These estimates will be used to characterize the local eigenvalue statistics and level spacing statistics for various models and energy regimes.