Martin Gebert*, UC Davis, 1 Shields Ave, Davis, CA 95616. A lower Wegner estimate and bounds on the spectral shift function for continuum random Schrödinger operators.

In this talk we prove a strictly positive, locally uniform lower bound on the density of states (DOS) of continuum random Schrödinger operators on the entire spectrum, i.e. we show that the DOS does not have a zero within the spectrum. This follows from a lower Wegner estimate for finite-volume continuum random Schrödinger operators. We assume throughout iid random variables and the single-site distribution having a Lebesgue density bounded from below on its support. The main mathematical novelty are pointwise-in-energy bounds on the expectation of the spectral shift function at all energies for these operators where we mainly focus on perturbations corresponding to a change from Dirichlet to Neumann boundary conditions along the boundary of a cube. We show that the bound scales with the area of the hypersurface where the boundary conditions are changed. (Received August 18, 2018)