

A Simplified Proof for a 1D Continuum Anderson Model Estimate

Sam Herschenfeld

Random Schrödinger operators, $H_\omega = H_0 + V_\omega$ model a particle in a disordered material. One way to express the long conjectured metal-insulator transition is through local eigenvalue statistics. Minami estimates bound the probability that H_ω restricted to a finite box has more than one eigenvalue in a small interval and are key to this field. Minami estimates have been around for awhile in the lattice. Klopp proved a Minami estimate in a 1D continuum model in 2014 and Dietlein and Elgart proved one for any dimension in an interval at the bottom of the spectrum in 2018.

We will see an introduction to these ideas, look at why the usual lattice proof does not generalize and give a simplified proof of Klopp's result. The talk will be accessible to those who are not familiar with the field or maybe just can't remember.