

C. Rojas-Molina: Open questions for fractional random Schrödinger operators

mercredi 26 octobre 2022 14:00 (1 heure)

We review some recent results on the fractional Anderson model, a random Schrödinger operator driven by a fractional laplacian. The interest on the latter lies in their association to stable Levy processes, random walks with long jumps and anomalous diffusion. While in certain regimes, the standard proofs of localization break down in this setting, we can still gather information about the integrated density of states and obtain estimates on the decay of the Green's function through a link to long-range self-avoiding random walks that exists in the case of random perturbations of the Laplacian.

This is based on joint work with M. Gebert, and with M. Disertori and R. Maturana Escobar.