GROUND STATE ENERGY OF THE DISCRETE RANDOM SCHROEDINGER OPERATOR WITH BERNOULLI POTENTIAL

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In this talk, I discuss a recent result on the probabilistic behavior of the ground state energy in an one-dimensional environment with Bernoulli-distributed potentials. While the distribution of energy can be classified for a wide range of potentials, Bernoulli-distributed potentials provide special difficulty because they lack density. In our result, this turns out to be a simplifying factor because high potential acts essentially like an infinite barrier for the ground state energy. The energy is strongly tied to the longest run of zero potential in the system. If there is time, I will also share some conjectures for excited states as well as for interacting systems.