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*The Anderson model with discrete disorder*

Consider the Schroedinger equation with a random potential taking values 0 or 1. This so-called Anderson-Bernoulli model has been a challenge to mathematicians seeking to understand the localized eigenstates at low energy. Somewhat paradoxically, the technical challenge has been in ruling out eigenfunctions that decay too rapidly. In 2005, Bourgain and Kenig solved this problem in the continuum, by developing quantitative unique continuation estimates. Their ideas don't work on the lattice, however. I will discuss results on the lattice $Z^d$ for the case of an N-valued potential, with N large, as well as progress on the Bernoulli case, N = 2.