

Abstract

Plenary

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Breakup of degeneracies in disordered quantum systems

For disordered quantum systems such as the Anderson model, degeneracies provide avenues for long-range tunneling, and hence are a barrier to localization. In order to control the likelihood of degeneracies or near-degeneracies, one needs to understand in detail the way eigenvalues and eigenvalue gaps depend on the disorder. Using multiscale analysis, one can build up smoothness of eigenvalue distributions even in the case of discrete disorder distributions.