Progress in statistical physics

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Title: Eigenstate Thermalization for Local and Nonlocal Operators

Abstract: The out-of-equilibrium behavior of quantum many-body systems is the subject of much recent interest. A fundamental question is the possibility of thermalization in isolation, i.e., in the absence of an external bath. Our current understanding of this issue is based on the eigenstate thermalization hypothesis (ETH). The ETH helps us reconcile unitary quantum dynamics with the predictions of statistical mechanics. I will introduce the ETH and then present scaling results for local and nonlocal operators.