

KdV Charges and Eigenstate Thermalization in 2D CFT

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Two dimensional CFTs lie on the cusp between integrable and chaotic theories. They possess an infinite number of commuting integrals of motion - the KdV charges - but are nevertheless expected to exhibit many of the properties of chaotic systems. The eigenstate thermalization hypothesis provides a sharp characterization of this chaos: a typical high energy state is approximated by a generalized Gibbs ensemble where a thermodynamic potential is introduced for each KdV charge. We describe progress on the characterization of this generalized Gibbs ensemble, and present new results on the statistics and modular transformation properties of KdV charges.

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