ICTS Special String Seminar

Title : Eigenstate thermalization and Virasoro symmetry

Speaker : Shouvik Datta, University of California, Los Angeles ICTS-TIFR, Bangalore

Date : Thursday, January 30, 2020

Time : 4:00 pm

Venue : Emmy Noether Seminar Hall, ICTS Campus, Bangalore

Abstract : Two dimensional conformal field theories have an infinite number of conserved charges and, at the same time, are dual to 3d gravity which admits black hole solutions. This leads to a puzzle on how the thermalization process can occur. We address universal aspects of this question which can be leveraged by using Virasoro symmetry alone. It turns out that matrix elements of light probes in typical high-energy descendant states have the right properties to ensure compatibility with the weak version of the Eigenstate Thermalization Hypothesis (ETH). The tools developed along the way also enable us to prove the property that conformal blocks exponentiate in the semi-classical regime.