



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Eigenstate Thermalization and Virasoro Symmetry

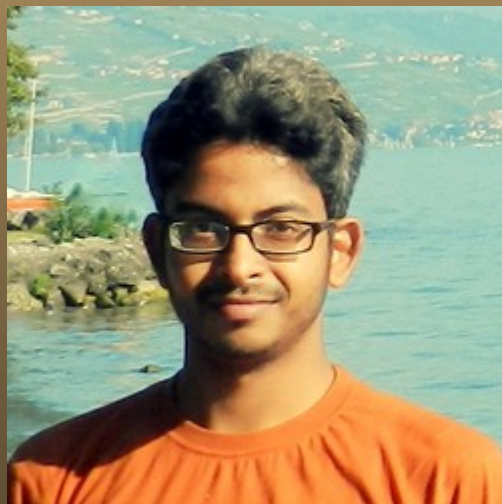
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Date: February 10th, 2020

Time: 11:30 am

Venue: A-304, TIFR



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 directly prove the property of conformal blocks exponentiating in the semi-classical regime.