ICTS Seminar

Title : Issues with thermalization in finite 1+1 D CFTs and their holographic duals.

Speaker : Ritam Sinha ,Tata Institute of Fundamental Research, Mumbai.

Date : Thursday, October 27, 2016

Time : 3:00 pm

Venue : Nambu Discussion Room (Right), ICTS Campus, Bangalore

Abstract : We explore the issue of thermalization in 1+1 D CFTs with hard wall boundaries that have been suddenly quenched from a gapped to gapless phase. Such quenched states can be modelled by a Cardy-Calabrese state that I shall describe briefly. We study quantities such as the energy density, one point function of primary operators and entanglement entropy (EE) in these states and find that all of them show revival with a time-period set by the spatial size of the system. We calculate the EE in the large c limit of the CFT, analytically, at all temperatures. We discuss the prescription for the bulk dual of our BCFT, suggested by Takayanagi, and match the holographic EE in this setup with the CFT EE in the Lorentzian signature. At this point, we reflect on some unclear issues in the prescription and also on the some aspects of (non-) thermalization.