

ICTS String Seminar (HYBRID)

Title : Constructing a local AdS holographic dual from the ERG of a CFT

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Date : Wednesday, 11th October 2023

Time : 03:00 PM (IST)

Abstract : The programme of interpreting the AdS bulk radial equations of motion as the boundary theory's RG equations is called Holographic RG. I will present our work which does not assume the AdS/CFT correspondence, and begins with the boundary Wilsonian action, to obtain the bulk action from the exact RG of the boundary. In the higher spin- $O(N)$ vector model duality, deforming the boundary theory with the scalar, vector current, and the energy momentum tensor, triggers an RG evolution. From the Polchinski ERG equation of this action, an evolution operator can be written and reinterpreted as a 4 dimensional functional integral. I will describe the field redefinition that maps the action in the functional integral obtained to the AdS theory that is local at quadratic level. Then I will show how a local graviton scalar scalar interaction in the bulk can be obtained by suitable approximation.

Venue : Please click on the below link to join the seminar

<https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09>