ICTS String Seminar (HYBRID)

Title : The matter with TT-bar + Lambda_2

Speaker : Eva Silverstein (Stanford University)

Date : Wednesday, 24th May 2023

Time : 07:30 PM (IST)

Abstract : The solvable TT-bar($+\Lambda 2$) deformation of holographic CFTs recently provided an explicit microstate count for the dS3 cosmic horizon, reproducing the refined Gibbons-Hawking entropy computed by Anninos et al along with the correct emergent radial bulk geometry.

This meshes with other work deriving the standard first law sign in bounded regions of dS and the flat entanglement spectrum in the global dS ground state. To build from this, we develop the correspondence toward incorporating the (subleading) effects of local bulk matter fields, adding contributions to the differential equation describing the deformation to capture local bulk gauge and scalar fields. This prescription retains the finiteness of the real ls spectrum (hence a type I Von Neumann algebra for finite Newton's constant), without the need for the strong factorization properties of TT-bar($+\Lambda 2$) alone. Thanks to the timelike boundary, the duality is relatively close to AdS/CFT, including non-dynamical boundary gravity and AdS-like Gao-Wald (causal) behavior upon excitation in a bounded patch. Finally, we resolve a a puzzle concerning the embedding of the deformation in string/M theory, finding a new role for (internal) averaging in quantum gravity.

Venue : **Online:** Please click the below link to join the seminar.

https://icts-res-in.zoom.us/j/88978222616?pwd=L1c4SzlvMEtzVUxjeS81TU1ONjA1QT09

Meeting ID: 889 7822 2616
Passcode: 191722