ICTS | INTERNATIONAL CENTRE for THEORETICAL SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String seminar (Online)

Title : Stretched horizon, replica trick, and off-shell winding condensate, and all that

Speaker : Indranil Halder (Harvard University)

Date : Wednesday, 13th March 2024

Time : 03:30 PM (IST)

Abstract : α' corrections to near horizon dynamics of a Schwarzschild black hole in a large number of spacetime dimensions D are governed by the worldsheet theory composed of the cigar CFT and the classical sigma model on the sphere at the horizon, along with a timelike-Liouville theory of central charge $26-D$. At leading order in weak string coupling, black hole thermodynamics is insensitive to the details of timelike Liouville theory. In this limit, we use the Lewkowycz-Maldacena-trick motivated infinitesimally off-shell closed string worldsheet formalism in [arxiv: 2310.02313] to calculate thermal entropy exactly in α'. The leading term in the $\alpha'\to 0$ limit and the first stingy correction of our result are in precise agreement with the target space Callan-Myers-Perry formula.

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

https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09
Meeting ID: 880 9276 6911
Passcode: 232322