

## ICTS String Seminar

**Title** : Semiclassical strings and holography beyond AdS

**Speaker** : Meseret Asrat (ICTS-TIFR, Bengaluru)

**Date** : Wednesday, 3<sup>rd</sup> July 2024

**Time** : 3:00 PM (IST)

**Abstract** : We consider certain rigidly rotating closed string solutions in an asymptotically non-AdS string background. The string background is a deformation of  $AdS_3 \times M_7$  with NSNS two-form B field. It interpolates between  $AdS_3$  and asymptotically linear dilaton  $IR \times S^1 \times IR$  spacetime (times the internal compact manifold  $M_7$ ). In the long string sector and weak coupling regime the deformation is dual to a single trace  $TTbar$  deformed symmetric product theory. We compute the quantity  $E - J$  for rotating folded and cusped closed strings, where  $E$  is the energy and  $J$  is the angular momentum of the strings. In the two dimensional CFT dual to string theory on  $AdS_3$  (times  $M_7$ ) it gives the anomalous dimensions of certain twist two and higher operators. We discuss the structure of (large angular momentum  $J$  expansion) of  $E - J$  and what it measures away from the CFT along the deformation in the coupling space. We also compute the closely related cusp anomalous dimension of a light-like Wilson loop. We also give semiclassical results for the spectrum of non-spinning pulsating strings.

**Venue** : Emmy Noether Seminar Room

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

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