



ICTS String Seminar

Title : Class S superconformal indices from maximal supergravity

Speaker : Ritabrata Bhattacharya (Utah State University, US)

Date : Wednesday, 05 February 2025

Time : 3:30 PM (IST)

Abstract : We present a new gauging of maximal supergravity in five spacetime dimensions with gauge group containing $ISO(5)$, involving the local scaling symmetry of the metric, and admitting a supersym- metric anti-de Sitter vacuum. We show this maximal supergravity to arise by consistent truncation of M-theory on the (non-spherical, non-parallelisable) six-dimensional geometry associated to a stack of N M5-branes wrapped on a smooth Riemann surface. The existence of this truncation allows us to holographically determine the complete, universal spectrum of light operators of the dual four- dimensional $N = 2$ theory of class S. We then compute holographically the superconformal index of the dual field theory at large- N , finding perfect agreement with previously known field theory results in specific limits.

Venue : Emmy Noether Seminar Room

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

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