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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title : Tensionless Strings: Closed and Open

Speaker : Priyadarshini Pandit (Indian Institute of Technology Kanpur)

Date : Wednesday, 28 May 2025

Time : 3:30 PM (IST)

Abstract : In this talk, I will explore both the closed and open sectors of bosonic tensionless string theory. I will begin with an overview of bosonic closed strings, focusing on physical state conditions governed by the 2D Carrollian Conformal or BMS_3 worldsheet gauge symmetry. This framework leads to three distinct quantum vacua, for which I will derive the compactified mass spectrum and analyze the influence of the Kalb-Ramond background field, including its implications for duality symmetries. The discussion will then shift to the tensionless open string sector, where I will present the construction of open null strings. Imposing Dirichlet boundary conditions, I will demonstrate the emergence of the Boundary Carrollian Conformal Algebra (BCCA) as the constraint algebra, and explain how these results naturally arise in the null limit of tensile open strings.

Venue : Emmy Noether Seminar Room

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

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