



ICTS String Seminar

Title : Holomorphic Modular Bootstrap of RCFTs

Speaker : Akhila Sadanandan (Indian Institute Of Technology Madras)

Date : Monday, 09 March 2026

Time : 3:30 PM (IST)

Abstract : The holomorphic modular bootstrap for classifying Rational Conformal Field Theories(RCFT) can be done using the Modular Linear Differential Equation (MLDE) and Vector Valued Modular Form (VVMF) approaches. I will explain MLDEs and how we can solve MLDEs with up to one accessory parameter and Wronskian index <6 to obtain admissible solutions. Further, I show how the modular S-matrix can be obtained numerically within the MLDE framework and how it leads to an exact expression. Using a combination of Hecke operators, GHM duality, Involutive duality and/or the known S-matrix, we will fix an ambiguity in degeneracy in the MLDE solution. In the VVMF perspective, quasi-characters, which arise as solutions to a matrix MLDE, are used to construct new admissible solutions with Wronskian index ≥ 6 . We show that these multiple perspectives provide a systematic framework to construct admissible solutions with up to six characters and arbitrary Wronskian index.

Venue : Online

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

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