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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title : MacDonald indices of 4d $N=2$ SCFTs from Hilbert series of arc spaces.

Speaker : Ranveer Kumar Singh (Rutgers University, USA)

Date : Thursday, 10 July 2025

Time : 3:30 PM (IST)

Abstract : In this talk, I will prove a formula for the MacDonald index of 4d $N=2$ SCFTs in terms of the Hilbert series of the arc space of the Zhu algebra of the associated chiral algebra. Using the formula, I will derive a closed form expression for the MacDonald index of (A_1, D_{2n+1}) Argyres-Douglas theories and explain various checks of the formula. The Schur limit of the formula results in a novel q -series identity. I will present a proof of the identity if time permits.

Venue : Chern Lecture Hall

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

Meeting ID: 880 9276 6911

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