



**S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES**

Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR

Department of Astrophysics and High Energy Physics

11th January, 2024

2.00 PM

FERMION / ONLINE

SPEAKER

**Dr. Upamanyu Moitra,
Post-Doctoral Fellow,
High Energy, Cosmology and Astroparticle Physics Section
The Abdus Salam International Centre for Theoretical Physics
Strada Costiera, Trieste, Italy**

TITLE OF THE TALK

Entanglement Entropy in String Compactifications

ABSTRACT

The finiteness of the entanglement entropy in string theory has crucial implications for the information paradox, quantum gravity, and holography. In my talk, I will describe the recent progress made on establishing this finiteness. I will describe the orbifold construction appropriate for analyzing entanglement in string theory, the tachyonic divergences that one encounters and how we get a finite and calculable answer for the entanglement entropy, including ten-dimensional string theory and compactification to lower dimensions.

(Based on works in collaboration with Atish Dabholkar)

HOST FACULTY

Dr. Sunandan Gangopadhyay, Associate Professor
Dept. of ASTROPHYSICS AND HIGH ENERGY PHYSICS
