ICTS String Seminar

Title : On type II string theory on $AdS_3 \times S^3 \times T^4$ and its CFT dual

Speaker : Ofer Aharony (Weizmann Institute of Science, Israel)

Date : Wednesday, 25 September 2024

Time : 2:30 PM (IST)

Abstract : I will review and discuss in detail type II string theory on $AdS_3 \times S^3 \times T^4$ and its $1+1$ dimensional superconformal field theory dual, emphasizing the string theoretic aspects of this duality. For one unit of NS-NS 5-brane flux ($Q_5 = 1$), this string theory has been suggested to be dual to a grand-canonical ensemble of T^{4N}/S_N free symmetric orbifold CFTs, and one goal will be to understand how this is consistent and how it fits with the description of other values of Q_5. I will discuss how the string genus expansion emerges in the grand-canonical partition function, and how the strong coupling limit of the NS-NS string theory arises (even at large N) in the free orbifold description, and why this limit does not have a weakly coupled R-R description. The dual CFT includes (for all values of Q_5) an extra T^4 factor that is decoupled from perturbative string theory, and I will discuss how this appears and how it is coupled to the CFT.

Venue : Feynman Lecture Hall
Zoom Link: https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09
Meeting ID: 880 9276 6911
Passcode: 232322