



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

On type II string theory on $\text{AdS}_3 \times \text{S}^3 \times \text{T}^4$ and its CFT dual

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Date: October 7, 2024

Time: 4 PM IST

Venue: AG66

Zoom link shall be shared separately



I will review and discuss in detail type II string theory on $\text{AdS}_3 \times \text{S}^3 \times \text{T}^4$ 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 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.