



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Entanglement, Replicas and Thetas

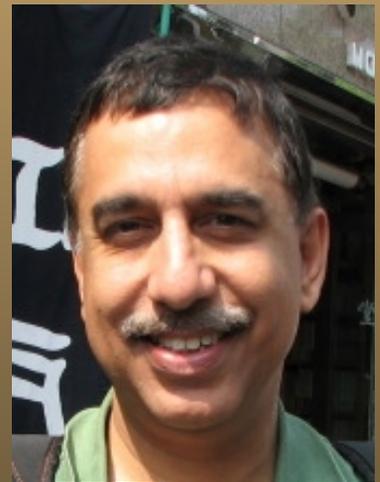
Sunil Mukhi

(IISER, Pune)

Date: March 27, 2017

Time: 11.30 am

Venue: A-304, TIFR



In the calculation of Renyi entropy for 2d CFT at finite size and finite temperature, one encounters a partition function on a higher-genus Riemann surface that is a branched cover of the torus. For free field theories there are two ways to compute this, one directly in higher-genus and the other using twist fields on the torus. This leads to some novel identities between genus- n and genus-1 theta functions. I will present preliminary evidence that these identities are true in an expansion in interval size, but not true as exact identities. Some consequences will be discussed.