ICTS | INTERNATIONAL CENTRE for THEORETICAL SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title	:	From Symmetric Product CFTs to AdS_3
Speaker	:	Rajesh Gopakumar (International Centre for Theoretical Sciences -TIFR, Bangalore)
Date	:	Wednesday, 06 January 2021
Time		03:00 pm
Abstract	:	How exactly do large N QFTs reassemble themselves into perturbative string theories? This talk will focus on an example which explicitly illustrates a general program of how this can happen around a free field fixed point. Specifically, we consider n-point correlators in the symmetric product orbifold theory, dual to tensionless strings on AdS_3, in a Gross-Mende like limit of large conformal dimensions. These correlators are given in terms of branched covering maps which we can exactly solve for in this limit, via a map to a matrix model with a logarithmic potential. The spectral curve encoding the matrix model solution then naturally gives rise to an integral over the dual string moduli space through a special (Strebel) parameterization of the latter. This is a precise realisation of what was proposed as the underlying mechanism for gauge-string duality in weakly coupled QFTS. Finally, the integrand on the moduli space can be cast in a number of striking forms including an action given by (the modulus of) the Schwarzian of the covering map
ICTS virtual seminar	:	Please register at https://docs.google.com/forms/d/e/1FAIpQLSf0jLgoqiOgDnxbEBGiuIWiOmh9WX8caH-pr13qDBZOO91lmg/viewform (Links to join the seminars will be sent to your registered email address)

Recordings of past talks can be found here:
https://www.youtube.com/channel/UCw9LdPQ5t7Q7muD0qzn70TA