Department of Theoretical Physics

# THE QUANTUM SPACETIME SEMINAR SERIES

## AdS/CFT Unitarity and the Inversion Formula

### (Zoom Seminar)

**David Meltzer**

(Caltech)

**Date:** August 11, 2020

**Time:** 10.30 am IST

Zoom link shall be shared separately

We discuss the constraints of unitarity on AdS/CFT perturbation theory, both from a boundary and bulk perspective. The role of scattering amplitudes in AdS is played by the correlation functions of the boundary CFT. We will explain how to study these observables using a bulk unitarity method, which generalizes the classic unitarity methods in the study of the S-matrix. We will also demonstrate how this bulk method is related to the Lorentzian inversion formula, which plays the role of the dispersion formula. As applications, we will discuss how to use these rules to study higher loop and point correlators in AdS/CFT.

Infosys