

A Differential Representation for Holographic Correlators

Monday, May 20, 2024 3:15 PM (1 hour)

I will discuss a differential representation for holographic four-point correlators. In this representation, the correlators are given by acting differential operators on certain seed functions. The number of these functions is much smaller than what is normally seen in known examples of holographic correlators, and all of them have simple Mellin amplitudes. This representation establishes a direct connection between correlators in position space and their Mellin space counterparts. The existence of this representation also imposes non-trivial constraints on the structure of holographic correlators. We illustrate these ideas by correlators in $AdS_5 \times S^5$ and $AdS_5 \times S^3$.

Presenter: YUAN, Ellis (Zhejiang University)