

A recipe for a bulk construction from a scalar CFT by a conformal flow

Thursday, 30 November 2023 14:45 (15 minutes)

We summarize our recent attempt to construct a bulk spacetime from a scalar CFT such as an $O(N)$ vector model by a conformal flow, which generates bulk fields from boundary scalar fields by smearing them. In this approach, bulk correlation functions are completely determined by the boundary theory, while bulk geometry is unspecified. We propose a method to determine the bulk geometry depending on a bulk state we consider, by employing the Bures information metric adopted for a specific state. We finally comment on necessities of both holography and large N limit for a geometric description of CFT.

Presenter: Prof. AOKI, Sinya (YITP, Kyoto University)

Session Classification: Parallel Session B