

Renormalization group approach to cMERA

Thursday, 8 December 2022 15:40 (20 minutes)

The MERA has attracted attention as a model that describes the geometry that emerges from boundary theory. Its continuous version, the cMERA, is expected to be a method to derive geometry directly from a continuous theory. In free field theories, the cMERA was successfully constructed based on the variational method. However, from the holographic point of view, it is crucial to construct the cMERA for interacting theories. Since constructing the cMERA is equivalent to determining the scale dependence of the wavefunctional, we consider an approach based on the renormalization group. We first construct the cMERA perturbatively in interacting scalar theories, and furthermore, we derive non-perturbative renormalization group equation for the wavefunctional.

Primary author: Mr KUWAHARA, Takaaki (Shizuoka University)

Presenter: Mr KUWAHARA, Takaaki (Shizuoka University)

Session Classification: Parallel session B