

Entanglement entropy and two-point functions of operators

Wednesday, 8 December 2021 14:00 (20 minutes)

Entanglement entropy (EE) is one of the basic measure of the quantum entanglement between the subsystem we see and the other. In order to establish the relation between such an entanglement and realistic observable, it is inevitable to study EE in general interacting field theory. In this talk, I will present our analysis in the case where the subsystem is a half-space, and give a formula for would-be-dominant contribution to EE in terms of renormalized two-point functions of various operators. Then, in attempt to generalize the result and to grasp the underlying structure, I will reconsider EE for a general subsystem in the free theory case, which is expressed with two-point function of the fundamental fields.

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Session Classification: Short talk