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Séminaire commun LPTENS/LPTHE

Mardi 26 Novembre 2019, 11 :30
LPTENS, LPTENS library
Domaines : hep-th

Titre : *Bulk Reconstruction Beyond the Entanglement Wedge*

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Résumé : *According to holographic subregion duality, the reduced CFT state on a boundary subregion is dual to the subregion's bulk entanglement wedge, and vice-versa. In sufficiently high dimensions, one can construct settings in which minimal 2-surfaces that are anchored to a given boundary subregion can reach parametrically far beyond the entanglement wedge. In particular, knowledge of the areas of all such 2-surfaces is sufficient to reconstruct the bulk metric in the region that they probe, and, in certain settings, these minimal 2-surface areas can be deduced from the expectation values of Wilson loops in the boundary subregion. This suggests that either the reduced CFT state encodes significant information about the bulk beyond the entanglement wedge, challenging conventional intuition about holographic subregion duality, or that the geometric computation of Wilson loop expectation values breaks down, even in very mild settings.*