

Collision in the interior of wormhole

Tuesday 17 November 2020 16:00 (1 hour)

Abstract:

The Schwarzschild wormhole has been interpreted as an entangled state. If Alice and Bob fall into each of the black hole, they can meet in the interior. We interpret this meeting in terms of the quantum circuit that prepares the entangled state. Alice and Bob create growing perturbations in the circuit, and we argue that the overlap of these perturbations represents their meeting. We compare the gravity picture with circuit analysis, and identify the post-collision region as the region storing the gates that are not affected by any of the perturbations.

Presenter: ZHAO, Ying