

# Entanglement entropy in Schwarzschild spacetime

*Friday, 26 November 2021 11:00 (15 minutes)*

Recently, it is proposed that the Hawking radiation contains the information of a region inside the horizon called islands. In the calculation of the entanglement entropy of the Hawking radiation, the dominant contribution comes from the configuration with wormholes between replica geometries. Thus, the entanglement entropy of the Hawking radiation effectively includes the contribution from the island. In this talk, I will discuss the entanglement entropy in the Schwarzschild spacetime, and its relation to the vacuum state of matter fields.

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**Session Classification:** Short talks