

Holography and holographic dualities

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Abstract

We study holographic dualities between two-dimensional quantum chaotic systems. We first identify a class of dualities based on the relaxation of the entanglement entropy of the Stueckelberg waveform, and discuss their properties. When the entanglement entropy is fully relaxed, the boundary state is said to be a holographic duality. We then argue that a class of dualities can be solved simply by finding the boundary states of the holographic duals. We show that a class of such dualities can be solved by rearranging the entanglement entropy. We explain how this is done by using an example of the holographic duality between two-dimensional quantum chaos. We then show that a class of dualities between two-dimensional quantum chaos can be solved by the determination of the partition function of the holographic duals. We argue that a class of such dualities can be solved by the partition function of the holographic duals.