Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

The Page curve for Reflected Entropy

(Zoom Seminar)

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Zoom link shall be shared separately

Reflected Entropy is a bipartite correlation measure with a simple geometric holographic dual, the minimal entanglement wedge cross section. This duality further motivates the idea that spacetime emerges from entanglement and illustrates the richness of the multipartite entanglement structure of holographic systems. A particularly interesting feature that we focus on in this talk is the phase transition between a connected and disconnected entanglement wedge where the reflected entropy jumps discontinuously. We explain how this phase transition is resolved in tensor networks and a model of JT gravity which motivate a general ansatz for the mechanism of the phase transition in AdS/CFT. We also demonstrate how the reflected entropy calculation motivates a procedure for building up geometry using tensor networks.

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