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Bulk quantum corrections for non-spatial holographic entanglement

Wednesday 4 September 2024 12:10 (20 minutes)

We introduce a generalized entanglement entropy, known as entwinement, in 2d CFTs measuring entanglement between non-spatially organized degrees of freedom. Its holographic dual is at leading order given by the area of codimension two surfaces winding around black hole horizons or naked singularities. We study bulk quantum corrections to this formula, generalizing results by Faulkner, Lewkowycz and Maldacena. Finally, we comment on implications for bulk geometry reconstruction from entanglement.

Link to publication (if applicable)

https://arxiv.org/abs/1910.05352, https://arxiv.org/abs/2105.01097 and upcoming work

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Track Classification: Black holes and quantum information 2