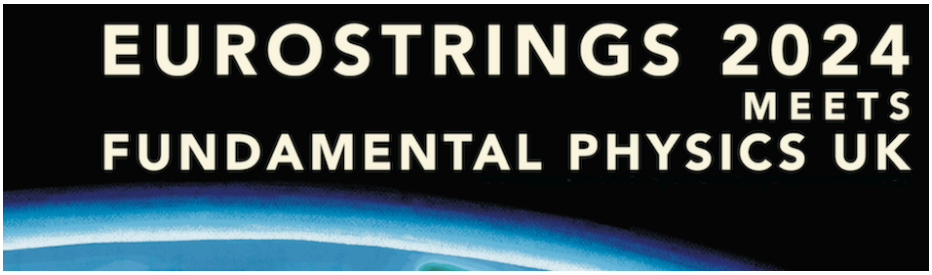

Contribution ID: **52** Type: **Talk in parallel session**

de Sitter Connectivity from Holographic Entanglement

Thursday 5 September 2024 15:10 (20 minutes)

Considering two antipodal observers in de Sitter space, we illustrate how spacetime connectivity between the holographic screens located on the (stretched) horizons emerges from holographic entanglement. To do so, we construct a covariant holographic entanglement entropy prescription in de Sitter space, including quantum corrections. Entanglement wedge reconstruction implies an extension of static patch holography where the exterior region connecting the static patches is included, and reconstructible from the two screens. A phase transition occurs where there is an exchange of dominance between two competing quantum extremal surfaces, leading to a transfer of the encoding of the exterior region from one screen to the other. If time allows it, we will discuss a generalization to closed FRW cosmologies.

Link to publication (if applicable)

https://arxiv.org/abs/2305.12861
https://arxiv.org/abs/2310.20652

Authors: RONDEAU, François (University of Cyprus); PARTOUCHE, Herve (Centre National de la Recherche Scientifique (FR)); TOUMBAS, Nicolaos (University of Cyprus); FRANKEN, Victor

Presenter: FRANKEN, Victor

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