

# SEMPARIS – Séminaires en région parisienne

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## Seminaire du LPTENS

**Mardi 25 Avril 2017, 14 :00**

LPTENS, LPTENS library

Domaines : hep-th

Titre : *On Holographic Complexity*

Orateur : **Shira Chapman ( Perimeter Institute )**

Résumé : *I will review the two recent conjectures relating the quantum complexity of a holographic boundary state to the spatial volume of the Einstein Rosen Bridge and to the gravitational action on a bulk region known as the Wheeler-DeWitt patch. I will also review recent progress on how to evaluate the gravitational action on regions with null boundaries. I will then explain how we used all that to answer a number of question regarding holographic complexity. In particular, what is the ‘complexity of formation’, i.e., the additional complexity arising in preparing the entangled thermofield double state with two copies of the boundary CFT compared to preparing the individual vacuum states of the two copies, and what can we say about the full time evolution of holographic complexity.*

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