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Seminar of the theory group of APC

Mardi 11 Septembre 2018, 14 :00
APC, 646 A - Mondrian
Domaines : hep-th

Titre : *CFT Entanglement Entropy and Topological Terms in Gravity*

Orateur : **Rodrigo Olea (Universidad Nacional Andres Bello, Santiago Chili)**

Résumé : *In 2006, Ryu and Takayanagi provided a general recipe on how to compute entanglement entropy of a Conformal Field Theory using gauge/gravity duality. This holographic prescription, which considers the extension of the entangling region from the boundary into an Einstein space bulk, has produced remarkable insight on general properties of strongly correlated systems. However, this progress has been made on a rather case-by-case basis, as it requires proper renormalization of the gravity action in the bulk.*

In this talk, we introduce a more geometric approach to deal with the above problem. By the addition of topological terms to the gravity action, we renormalize the holographic entanglement entropy and relate holographic properties of CFTs to a topological number (Euler characteristic).