SEMPARIS – Séminaires en région parisienne

`http ://string.lpthe.jussieu.fr/semparis/`

Cours

Vendredi 1 Octobre 2021, 10 :00
IPHT, Amphi Bloch (hybrid ; remote audience needs to register, see below)(Remote audience needs to register at https ://courses.ipht.fr/ ?q=en/node/271 Livestream on https ://www.youtube.com/c/IPhTTV)
Domaines : hep-th

Titre : *Celestial holography primer*

Orateur : **Andrea Puhm (CPHT)**

Résumé : *One of the most powerful tools for understanding quantum aspects of gravity is the holographic principle, which asserts a duality between a theory of quantum gravity on a given manifold and a field theory living on its boundary. A concrete realization in spacetimes with negative curvature is the AdS/CFT correspondence, but it remains an important open question if and how the holographic principle is realized for general spacetimes.*

Recently, the holographic dual of quantum gravity in asymptotically flat spacetimes has been conjectured to be a codimension-two conformal field theory which lives on the celestial sphere at null infinity, aptly referred to as celestial CFT. A first hint at such a duality is the equivalence between the action of the Lorentz group and global conformal transformations on the celestial sphere. Moreover, when recast in a basis of boost eigenstates, scattering amplitudes transform as conformal correlators of primary operators in the dual celestial CFT. These celestial correlators appear to have some, but not all, of the properties of standard CFT correlators. The goal of this course will be to give an introductory guide to recent advances in celestial holography.
