Contribution ID: **209** Type: **Oral**

# Effective quantum states for trapped surfaces

Trapped surfaces are the basic building blocks of a black hole region. Marginally trapped surfaces, which are trapped surfaces with vanishing value of the outward null expansion scalar, foliate the null horizon of a black hole in equilibrium. Using the intrinsic geometry of trapped surfaces, it shall be argued that the algebra of classical charges follow a simple algebra. The representation of this algebra leads to an effective description of quantum states residing of the horizon.

## Email

ayancuhp@gmail.com

## Affiliation

Central University of Himachal Pradesh

**Author:** CHATTERJEE, Ayan (Central University of Himachal Pradesh)

**Presenter:** CHATTERJEE, Ayan (Central University of Himachal Pradesh)

**Session Classification:** Classical & Quantum Gravity

**Track Classification:** Classical & Quantum Gravity