



Contribution ID: 7

Type: Oral

Slowly evolving horizons in Einstein gravity and beyond

Tuesday 18 June 2024 09:00 (30 minutes)

In this talk, I explore the determination of an event horizon candidate for slowly evolving dynamical black holes (BHs). Such a candidate has been termed as a *slowly evolving null surface* (SENS). Such surfaces are of interest because they coincide with the event horizon and are causal, unlike apparent horizons. Moreover, known laws of BH mechanics can be established for these slowly evolving surfaces. I discuss a few example spacetimes and the constraints that must be placed on parameters describing them to allow a physically admissible SENS. I start with spherically symmetric examples and talk about consequences when we perturbatively break free from such symmetry.

Author: TARAFDAR, Ayon (Memorial University of Newfoundland)

Presenter: TARAFDAR, Ayon (Memorial University of Newfoundland)

Session Classification: Session 1.1