



Contribution ID: 118

Type: **not specified**

A. Vaño-Viñuales: Towards causal visualization of collapsing hyperboloidal slices

Monday 19 December 2022 17:45 (15 minutes)

Carter-Penrose diagrams are a useful tool to understand the causal properties of spacetimes. I will consider the spherically symmetric collapse of a massless scalar field in the context of numerical relativity. The evolution takes place on hyperboloidal slices, which are smooth and spacelike, and reach future null infinity. This is the collection of the endpoints of future-directed null geodesics and where global quantities of spacetimes are unambiguously defined. I will describe the process to create dynamical Penrose diagrams of the collapse using numerical data and report on the results' current status.

Session Classification: Session 4 A