Iberian Strings 2023



Contribution ID: 186

Type: not specified

Trans-IR flows to black hole singularities

Wednesday 11 January 2023 11:50 (30 minutes)

Probing the interior of a black hole using gauge/gravity duality remains an active area of research. In this talk, I will present one recent attempt to probe the black hole interior by analytically continuing traditional holographic RG flows beyond their IR-fixed point. Such "trans-IR" flows are a natural framework for describing physics inside of black holes. First, I will discuss the construction of a monotonic holographic a-function which counts degrees of freedom along the trans-IR direction. Then with this function, I will argue that the degrees of freedom "thin out" and vanish when flowing to a trans-IR endpoint, represented by a Kasner singularity. Finally, I will discuss the relationship between this 'a' function and well-studied quantum information probes in the language of trans-IR flows.

Presenter: PATRA, Ayan Kumar (IFT-Madrid) **Session Classification:** 30' Contribution