Black Holes, Neutron Stars, and Gravitational Waves @ Black Sea



Contribution ID: 25

Type: Oral presentation

Doubly regular black holes

Tuesday 17 June 2025 15:55 (15 minutes)

Black holes in general relativity possess curvature singularities. These are not the only type of singularities that a spacetime can possess though. The Kerr solution, for example, also exhibits a *thermodynamic singularity* at a specific, non-extremal value of the spin parameter where the heat capacity diverges ("Davies' point"). Given the deep connections between black holes and thermodynamics, it seems desirable to consider objects which are not only physical-space regular but phase-space regular also. I will discuss some results regarding such "doubly-regular" holes, including context with respect to physical interpretations of the heat capacity.

Authors: SUVOROV, Arthur (University of Alicante); Dr BARGUEÑO, Pedro (University of Alicante) Presenter: SUVOROV, Arthur (University of Alicante)