

Name: Paulo Garcia

Affiliation: CENTRA/FEUP

Title: Recent results from the GRAVITY collaboration on SgrA* supermassive black hole

Abstract: We will present the recent efforts on the hunting and gathering of knowledge on the galactic centre supermassive black hole close environment, by the GRAVITY collaboration. In our last talk we celebrated the 2020 Nobel prize with a focus on the gravitational redshift and the Schwarzschild precession. In this talk we will focus on recent results on imaging the inner stars orbiting SgrA* and how these orbits constrain the central object and extended dark matter configurations. We will also address recent results on the flaring of SgrA* and on the environment near the horizon. We will end with the current effort to constrain the spin via the building of a new instrument Gravity+.