Resolving the shadows of Black Holes with the EHT

Plenary Session

Wednesday, June 29th 2022 15:00 - 15:30 AUDITORIUM 1

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The black holes in SgrA and M87 are expected expected to be optically thin at millimetre wavelengths and to cast similar size shadows (40-50 micro-arcsec diameter). The Event Horizon Telescope has targeted both objects in 2017 and published first the image of the M87 black hole in 2019. Innovating calibration, imaging and analysis tools, the M87 showed the expected ring-like emission, consistent with previous estimates of its mass and distance. By comparing with GRMHD simulations these observations start to constrain accretion and jet launching mechanisms, in particular when polarisation information is also included. In the context of testing gravitation, SgrA* is expected to offer tighter constraints as its mass and distance are a-priori more accurately known. To image SgrA* required our team to overcome interstellar scattering and source variability. In this talk the results of the 2017 observing campaign will be reviewed, highlighting the main conclusions and introducing more specialist topics.