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CENTRO DE I&D EM MATEMÁTICA E APLICAÇÕES
CENTER FOR R&D IN MATHEMATICS AND
APPLICATIONS

Gravitational Geometry and Dynamics Group Seminar

Wed. 19th April '23 Online at 15h30

Testing Fundamental Physics with the Event Horizon Telescope

Lia Medeiros

Princeton - IAS

Zoom meeting ID 962 2413 8340

passcode: ask to annulli@ua.pt - herdeiro@ua.pt

New horizon-scale images of the Galactic Center black hole Sagittarius A* (Sgr A*) recently published by the Event Horizon Telescope (EHT) allow for new strong-field tests of the Kerr metric in a previously unexplored regime. I will discuss the recent EHT observations of Sgr A* with a particular focus on how these new results can be used to test fundamental physics. I will briefly touch upon the earlier M87 results as well. I will also discuss future prospects for the EHT including additional telescopes and a shorter wavelength. Finally, I will introduce a new machine-learning algorithm for EHT data analysis that uses a large library of high-fidelity simulations as a training set.

[https://videoconfcolibri.zoom.us/j/96224138340?](https://videoconfcolibri.zoom.us/j/96224138340?pwd=YkZUMGILb0dqVjcxOVpXMTFVMTBxQT09)

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