Contributed talks - State of the art techniques in Strong gravity

## Session 1 - Talks on various topics in general relativity

Luís Crispino- "Absorption and Scattering by Black Holes and Wormholes"

Guilherme Raposo - "TBD"

Guilherme Simplício - "Applying Emerging Deep Learning Techniques to General Relativity"

Jianzhi Yang - "Pseudo-analytic approximation of Spherical Boson Star"

Miguel Zilhão - "A quick introduction to Meshless methods"

## **Session 2 - Construction of solutions and its properties**

Eugen Radu- "The stationary two black hole solution beyond electro-vacuum"

Víctor Jaramillo - "Magnetostatic boson stars"

Etevaldo Costa - "Proca-Higgs balls and stars in a UV completion for Proca self-interactions"

Nuno Santos - "Swinging boson stars"

Marco Brito - "Stability and physical properties of spherical excited scalar boson stars"

## **Session 3 - Gravitational waves and perturbations**

Lorenzo Annulli - "Are multi black-hole solutions good proxies for binaries?"

Marco Finetti - "Gravitational waves from strong 1st order phase transitions"

Jorge Delgado- "Extreme- Mass Ratio Inspirals of Kerr Black Holes with Scalar Hair with j=1"

## Session 4 - Lensing and geodesic structure

Haroldo Junior - "Separability structures and applications to General Relativity"

João Novo - "Probing the Kerr extremal limit

Sérgio Xavier - "Shadows of black holes with dark matter halo"

Pedro Cunha - "Fundamental Photon Orbits around compact objects"

Ivo Sengo - "Proca Stars and hairy black holes with accretion disks"

Zeus Sales - "Light rings, shadows and lensing of black holes in swirling universes"