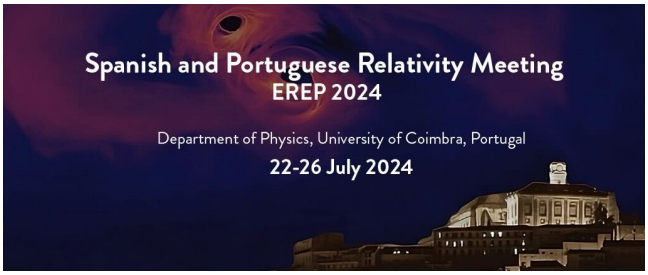

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Non-singular scale-dependent black hole and some properties

Tuesday 23 July 2024 15:15 (15 minutes)

In this talk, we will study the shadow, the greybody bounding, and the QNMs of a non-singular black hole in 4-dimensional spacetime in the context of scale-dependent gravity. Our focus is on determining constraints on the scale-dependent parameter, which serves as a descriptor for the scale-dependent solution with respect to the classically observed shadow radius. We also perform an analytical computation of the weak deflection angle using the Gauss-Bonnet theorem, as well as an analytical computation of the rigorous bounds of the Greybody factor (for scalar fields and photons). Scalar quasinormal modes are also investigated.

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