

Spanish and Portuguese Relativity Meeting



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Black holes in effective field theories –dynamics and new observational signatures

Thursday 25 July 2024 11:00 (40 minutes)

Black holes in effective field theories, such as scalar-Gauss-Bonnet theory, offer interesting alternatives to the Kerr solution that can be tested observationally. In the present talk, we will discuss some of the most interesting examples of such beyond-Kerr black holes. Special attention will be paid to the progress in studying their dynamics in cases when they are isolated and when put in a binary. Such studies shed light on the nonlinear stability and potential loss of hyperbolicity of beyond-Kerr black holes from a theoretical perspective. On the other hand, they are the ultimate tools to predict gravitational wave emission of black hole coalescence that can deviate significantly from GR, especially in the nonlinear phase of the merger.

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