

Contributed Talk

Name: Pablo A. Cano

Position: Post-Doc/Research Fellow

Affiliation: KU Leuven

Title: Ringing of black holes in higher-derivative gravity

Abstract: Quasinormal modes describe the gravitational waves emitted by a black hole after it is perturbed, and hence they characterize the so-called ringdown phase after the merger of a black hole binary. The measurement of these modes and comparison with the theoretical prediction will provide a strong test on GR, but this will also allow us to search for deviations with respect to it. However, computing the QNMs of black holes in beyond-GR theories is a very complicated problem. In this talk, I will review recent progress on the computation of the quasinormal modes of rotating black holes in higher-derivative gravity. I will explain the main obstacles in this computation, and show how they can be tackled in certain cases. I will show some results in the case of perturbations of a test scalar field for fully rotating black holes, and report progress on the gravitational perturbations of slowly rotating ones.