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Exploiting the effective-one-body approach for large-mass-ratio black hole binaries

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The gravitational waves (GWs) that we have detected so far are emitted by compact binaries where the mass ratio between the two objects is of order 1:1 to 1:10. Third-generation GW detectors will instead allow us to receive different signals, like the ones coming from black hole binaries with a larger mass ratio, from 1:100 up to 1:10^6. The orbits of such systems are expected to be eccentric and inclined, thus requiring a careful and accurate modelling. In this talk, I will present ongoing work to exploit the effective-one-body approach for the description of such binaries.

Primary author: ALBERTINI, Angelica (Charles University, Prague)

Presenter: ALBERTINI, Angelica (Charles University, Prague)

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