Contribution ID: **54**   Type: **not specified**

Black-hole ringdown and their progenitors: from numerical Relativity to tests of GR

Wednesday, 18 September 2024 15:20 (20 minutes)

Black-hole ringdowns from binary coalescences encode information about the final state of the remnant through their modes of oscillation, and about their progenitors through the degree of excitation of different modes. We present novel surrogate fits for the excitation amplitudes of black-hole ringdowns from quasi-circular binaries. They are calibrated to numerical relativity simulations and make use of parametric-free regression algorithms, which provide functional flexibility and automatic estimates of the fitting uncertainties. We apply our results to test the consistency of detected black-hole ringdowns with the predictions of GR and with the assumption of quasi-circularity.

Primary author: PACILIO, Costantino (Istituto Nazionale di Fisica Nucleare)

Presenter: PACILIO, Costantino (Istituto Nazionale di Fisica Nucleare)

Session Classification: TEONGRAV Session