Effective-one-body modeling of generic black-hole binaries AN-DREA TARACCHINI, University of Maryland — We report on the current status of the effective-one-body description of gravitational-wave emission from black-hole binaries. An ongoing effort at the interface between analytical and numerical relativity aims at the construction of an accurate model that could be used for detection and parameter estimation with advanced ground-based detectors. We will show how the effective-one-body model has been extended to generic mass ratios and spin magnitudes in nonprecessing systems by calibrating it to a large catalog of numerical-relativity waveforms. We will also discuss how to build precessing waveforms starting from such accurate nonprecessing model, and show comparisons with numerical relativity.

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