

Abstract Submitted
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GWSurrogate: An easy-to-use interface to gravitational wave surrogate models SCOTT FIELD, Univ of Mass - Dartmouth, CHAD GALLEY, California Institute of Technology, JONATHAN BLACKMAN, Theorem LP — Recently there has been significant interest in building data-driven gravitational wave models directly from numerically generated data. These surrogate (or reduced-order) models can faithfully reproduce a parameterized gravitational wave model specified through computationally expensive ordinary or partial differential equations with significant speedups. Surrogates can be used, for example, to accelerate the generation of effective one body or numerical relativity (NR) waveform models thereby reducing the overall runtime of a multi-query data analysis study. For surrogates to be useful, it is necessary that they be publicly available, easy-to-use, and decoupled from the building codes which produce them. In this talk, I will describe a lightweight open-source code, GWSurrogate, which aims to address this issue. I will also briefly summarize the most recently built NR surrogate waveform models including those which describe precession.

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