

Abstract Submitted
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Modeling rapidly spinning, merging black holes with numerical relativity for the era of first gravitational-wave observations GEOFFREY LOVELACE, Cal State Univ-Fullerton, SIMULATING EXTREME COLLABORATION, LIGO SCIENTIFIC COLLABORATION — The Advanced Laser Interferometer Gravitational-Wave Observatory (Advanced LIGO) began searching for gravitational waves in September 2015, with three times the sensitivity of the initial LIGO experiment. Merging black holes are among the most promising sources of gravitational waves for Advanced LIGO, but near the time of merger, the emitted waves can only be computed using numerical relativity. In this talk, I will present new numerical-relativity simulations of merging black holes, made using the Spectral Einstein Code [black-holes.org/SpEC.html], including cases with black-hole spins that are nearly as fast as possible. I will discuss how such simulations will be able to rapidly follow up gravitational-wave observations, improving our understanding of the waves sources.

Geoffrey Lovelace
Cal State Univ-Fullerton

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