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Gravitational-wave memory from coalescing binaries[1] MATTHEW KARLSON, KEVIN CHEN, MARC FAVATA, Montclair State University — The nonlinear or Christodoulou memory is a non-oscillatory contribution to the gravitational-wave signal that arises from the gravitational-wave stress energy tensor. Using a semi-analytic approach we generate memory signals for a range of binary black hole parameters, extending previous work. We also—for the first time—compute the nonlinear memory for binary neutron star mergers. These waveforms will be useful for future searches of the nonlinear memory in ground and space-based detectors.

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Marc Favata
Montclair State Univ

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