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Abstract for an Invited Paper
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Using the large mass-ratio limit to understand the two-body problem in general relativity[1]

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In this talk, I will describe ongoing work and recent progress using a particularly clean and astrophysically important limit of the two-body problem, that of large mass ratio. This limit accurately describes extreme mass ratio capture systems, anticipated to be an important contributor to the data for future LISA measurements, and has proven surprisingly useful even at mass ratios that are not so large. I will describe the framework that is now being built to rapidly compute leading-order "adiabatic" large mass-ratio waveforms, ongoing work to examine important effects that go beyond this leading order, and recent analyses which indicate that one can extrapolate large mass-ratio results surprisingly far beyond this limit's strict domain of validity.

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