

Abstract Submitted
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A self-force primer for numerical relativists STEVEN DETWEILER, IAN VEGA, University of Florida — A small mass μ moving about a much more massive black hole M travels along a world line that is most easily described as being a geodesic of the perturbed metric $g_{ab} + h_{ab}$, where $h_{ab} \sim O(\mu)$ is the metric perturbation suitably regularized at the location of the small mass. This motion is said to result from the gravitational self-force acting on μ . A novel technique uses currently available methods of numerical relativity to calculate the regularized h_{ab} , the self-force acting back on μ , and the effects of the self-force on the gravitational waves being emitted in the context of extreme mass ratio inspiral.

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