Self-force in a gauge appropriate to separable wave equations\textsuperscript{1}
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Gravitational waves from the inspiral of a stellar-size black hole to a supermassive
black hole can be accurately approximated by a point particle moving in a Kerr back-
ground. The talk presents progress on computing the self-force in a gauge that is
constructed from the gauge-invariant Weyl tensor. The gauge and the renormaliza-
tion method are chosen to compute a perturbed metric and renormalized self-force
from the Teukolsky equation. The method is related to earlier work by Cohen,
Kegeles, Lousto, Detweiler, and Whiting, and to the MiSaTaQuWa renormalization.

\textsuperscript{1}Work supported in part by NSF Grant PHY0503366