

Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Applying the effective-source approach to gravitational self-force calculations BARRY WARDELL, Cornell University/University College Dublin — The equations of motion of a point particle interacting with its own field are defined in terms of a certain regularized self-field. A leading method for computing this regularized field is the effective-source approach, which has the benefit of being applicable in cases where traditional mode-sum regularization is inadequate. This approach has previously been successfully applied in scalar-field toy models and in a restricted class of gravitational-field models. In this talk I will present recent progress on gravitational effective-source calculations, with a particular focus on applications at second perturbative order.

Barry Wardell
Cornell University/University College Dublin

Date submitted: 09 Jan 2015

Electronic form version 1.4