Progress in Post-Newtonian Data for Numerical Relativity BERNARD KELLY, MANUELA CAMPANELLI, University of Texas at Brownsville, BERNARD WHITING, University of Florida, WOLFGANG TICHY, Florida Atlantic University — Physically realistic initial data for the black-hole-binary problem is expected to accord with predictions from post-Newtonian theory at sufficiently large separations. Schemes for using this idea in obtaining 3+1 initial data for black-hole binaries have recently been proposed by Tichy et al and by Nissanke. However in numerical applications based on post-Newtonian results, some difficulties have been encountered in the far-field region. We report on progress in extending these schemes up to 2.5 pN order to obtain globally well-behaved data sets that reduce asymptotically to the Kerr solution.

Bernard Kelly
University of Texas at Brownsville