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Abstract for an Invited Paper for the APR06 Meeting of the American Physical Society

## **Neutron Stars in Compact Binaries** THOMAS BAUMGARTE, Bowdoin College

In this talk I will review recent progress in numerical relativity simulations of neutron stars in compact binaries. I will first discuss the construction of initial data that model binary neutron stars and black hole-neutron star binaries in quasiequilibrium. I will then describe dynamical evolution calculations of such binaries that simulate the neutron stars' coalescence, collapse or tidal disruption, and I will close by discussing some of the astrophysical implications of these simulations.