1082-83-61 **Robert Owen*** (rowen@oberlin.edu). *Physical Interpretation of Numerical Spacetimes.*

Numerical relativity provides a marvelous testbed for exploring the nonlinear dynamics of spacetime. When considering problems involving multiple black holes, it is tempting to interpret interactions in the language of Newtonian physics. Unfortunately, such efforts are clouded by two (related) peculiarities of general relativity: the nonlocal nature of energy and momentum, and the nonexistence of a preferred family of coordinate systems. The former issue can be partially ameliorated with the help of quasilocal constructions. The latter issue is more open. In this talk, I will review some of the tools used in modern numerical relativity, particularly in the SpEC code, for interpreting the dynamics of generic spacetimes. (Received June 18, 2012)