1047-35-332   **Wilhelm Schlag*** (`schlag@math.uchicago.edu`), 5734 South University Avenue, University of Chicago, Department of Mathematics, Chicago, IL 60637. *Center-stable manifolds for orbitally unstable evolution equations.*

We will review some recent work on a class of nonlinear wave equations which exhibit both data which lead to blow-up in finite time as well as special families of global 'soliton'-like solutions. These special solutions are orbitally unstable but turn out to be conditionally stable in the sense that there exists a center-stable manifold which contains these solutions. We will review some results in this area and state a number of open problems. (Received February 01, 2009)