1113-76-216   **Jerry Bona*** (`bona@math.uic.edu`), University of Illinois at Chicago, Dept Math., Statistics and Computer Sci., 851 S. Morgan Street MC 249, Chicago, IL 60607, **Hongqiu Chen**, University of Memphis, Department of Mathematical Sciences, 373 Dunn Hall, Memphis, TN 38152, and **Ohannes Karakashian** (`ohannes@math.utk.edu`), Department of Mathematics, University of Tennessee, Knoxville, TN 38152. *Solitary-wave Solutions of Systems of Nonlinear Wave Equations.* Preliminary report.

Discussed here are systems of nonlinear, dispersive wave equations. Recent theory has shown that in general, they have more than one class of solitary-wave solutions. The theory also indicates that not all of them are stable.

Using a numerical scheme based upon discontinuous Galerkin ideas, we investigate what happens to unstable waves under small perturbations. This leads to a conjecture about necessary and sufficient conditions for stability and for global well-posedness of the associated initial-value problem. (Received August 22, 2015)