

1155-65-466

Jerry L. Bona, Hongqiu Chen and **Ohannes A. Karakashian*** (okarakas@utk.edu),
Knoxville, TN 37919, and **Michael Wise**. *Finite Element Methods for a System of Non linear
Dispersive Equations.*

We construct a priori and a posteriori error estimates for a system of KdV-KdV equations coupled through the non linear terms. We present numerical experiments validating the theoretical results. In particular we study the stability of solitary wave solutions and point out differences with the behaviour of solutions of the (single) KdV equation. (Received January 20, 2020)