

CARLEMAN ESTIMATES AND GLOBAL STABILIZATION OF A NONLINEAR DISPERSIVE SYSTEM POSED ON A BOUNDED DOMAIN

ADEMIR F. PAZOTO *

We consider a coupled system of two generalized Korteweg-de Vries equations under the effect of a damping term. The stabilization, as well as, the global existence of weak solutions are investigated when the exponent in the nonlinear term ranges over the interval $[1, 4)$. We derive a Carleman estimate to prove that the energy of the system decays exponentially to zero as the time variable goes to infinity.

Joint work with Dugan Nina Ortiz and Lionel Rosier.