

28th Southeastern-Atlantic Regional Conference on Differential Equations, October 10–11,
2008, University of Arkansas at Little Rock, Little Rock Arkansas, USA

**SENSITIVITY ANALYSIS FOR MINMAX PARAMETER CHOICE
FOR A NONLINEAR CABLE-MASS SYSTEM.**

JOHN TEYE BROWN

The goal of this work is to minimize the computational cost associated with the experimental determination of the critical parameter used in the design of the Min-Max controller. To this end, the sensitivity of the controlled state to variations in the parameter is examined mathematically using continuous sensitivity equations. The sensitivity of the controllers performance, robustness and convergence with respect to the parameter is also studied. By analyzing these various sensitivities, it is hoped that a mathematically justified parameter can be determined.

LOUISIANA TECH UNIVERSITY
E-mail address: `jtb038@latech.edu`