

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

CONTROL PARAMETER DETERMINATION FOR LOW ORDER CONTROLLERS

KATIE EVANS

The H_∞ controller has received much research attention because of its robustness to disturbances and uncertainties since first being introduced by Zames. Rhee and Speyer later introduced the MinMax controller, which is a differential game approach to solving the H_∞ control problem. This talk will focus on the determination of the MinMax control parameter using a non-iterative methodology in the design of low order LQG balanced controllers. Preliminary results based on the comparison of performance, robustness, and convergence properties of low order MinMax controllers will be presented. The problem of interest in this discussion is a nonlinear cable-mass system.

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