AN ASYMPTOTIC STABILITY ANALYSIS OF NEUTRAL TIME DELAYS SYSTEM WITH NONLINEAR UNCERTAINTY

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Abstract: In this paper, the asymptotic stability for neutral delay differential system with nonlinear Uncertainties is investigated. Many works have been reported using a variety of methods. However, more focus on the use of the Lyapunov-Krasovskii theory to derive sufficient stability conditions in the form of linear matrix inequalities. These stability conditions are formulated as linear matrix inequalities (LMIs) which can be easily solved by various convex optimization algorithms. Here we present the basic concepts involved in stability and also we reported and developed to analyze the asymptotic stability of Neutral Time Delay-differential systems.

Keywords and Phrases: Stability, Delay-dependent stability, Linear Matrix Inequality, Lyapunov-Krasovskii functional, Time-varying delay.

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