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Results on Behavior of Solutions of Third Order Delay Differential Equations

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Abstract

This paper aims at investigating certain criteria for obtaining uniform-asymptotically stable and uniform-ultimate bounded solutions to certain third order delay differential equation. Using a newly constructed Lyapunov-Krasovskii functional, we prove these criteria and validate them with two numerical examples. The results expand upon earlier findings in the field.

Keywords Third order · uniform ultimate boundedness · stability · Lyapunov functional.

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