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STABILITY ANALYSIS FOR CONTINUOUS NEUTRAL SYSTEMS

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Abstract

For a class of neutral systems with neutral and discrete constant delays, some asymptotic stability criteria are derived from matrix analysis techniques. Compared with the original stability criteria, the proposed ones ensure the conservation lower. These conditions are obtained by using Lyapunov-Krasovskii functional on the multidimensional integrals. Numerical examples demonstrate the effectiveness of the mentioned technique.

Keywords and phrases: neutral systems, asymptotic stability, Lyapunov-Krasovskii functional, time delay.