

Advanced Stability Criterion for Time-Delayed Systems of Neutral Type and Its Application

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Abstract : This paper investigates stability problem for linear systems of neutral type with time-varying delay. By constructing various Lyapunov-Krasovskii functional, and utilizing some mathematical techniques, the sufficient stability conditions for the systems are established in terms of linear matrix inequalities (LMIs), which can be easily solved by various effective optimization algorithms. Finally, some illustrative examples are given to show the effectiveness of the proposed criterion.

Keywords : neutral systems, time-delay, stability, Lyapunov method, LMI

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