

Global Exponential Stabilization for Several Classes of Uncertain Nonlinear Systems with Time-Varying Delay

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Abstract: In this paper, exponential stabilization for three classes of uncertain nonlinear systems with time-varying delay is investigated. A continuous feedback control is constructed for each class of systems, under which global exponential stability of the feedback-controlled system can be guaranteed. Our results are shown to be generalizations of several results reported in recent literature. A numerical example is provided to illustrate the use of our main results.

Keywords: *Global exponential stabilization; uncertain systems; time-varying delay; Lyapunov function.*

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