Exponential Stability
of Perturbed Nonlinear Systems

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Abstract: In this paper, we deal with the stability analysis problem of perturbed nonautonomous nonlinear systems. Uniform exponential stability is studied by using Lyapunov techniques. The question addressed is related to the restriction about the perturbed term under the assumption that the origin of the nominal system is globally exponentially stable. A new Lyapunov function is used to obtain a large class of stable dynamical systems.

Keywords: *Nonlinear systems; Lyapunov function; exponential stability.*

Mathematics Subject Classification (2000): 37B25, 34D20, 93D05, 93D15.