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Vu Ngoc Phat* (vnphat@math.ac.vn), Department of Control and Optimization, Institute of Mathematics, 18 Hoang Quoc Viet, Cau Giay, Hanoi 10307, Vietnam. *Global stabilization of nonlinear switched time-delay systems via matrix inequalities*. Preliminary report.

This paper deals with the global stabilization for a class of nonlinear hybrid control systems with time-varying delay. Using Lyapunov-Razumikhin functional approach combined with Newton-Leibniz formula, neither restriction on the derivative of time-delay function nor bound restriction on nonlinear perturbations is required to design switching rule for exponential stabilization of nonlinear switched systems with time-varying delays. The conditions are presented in terms of the solution of some matrix inequality equations (Received September 03, 2008)