عنوان مقاله:

Design of a Novel Framework to Control Nonlinear Affine Systems Based on Fast Terminal Sliding-Mode Controller

محل انتشار:

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خلاصه مقاله:

In this paper, a novel approach for finite-time stabilization of uncertain affine systems is proposed. In the proposed approach, a fast terminal sliding mode (FTSM) controller is designed, based on the input-output feedback linearization of the nonlinear system with considering its internal dynamics. One of the main advantages of the proposed approach is that only the outputs and external states of the system should be measured. Moreover, in order to realize finite-time convergence of the output variables, a set of switching manifolds with a recursive procedure is utilized. Finally, robust stability and efficacy of the proposed control law are shown through computer simulations

کلمات کلیدی:

,,,Finite-time stability,Internal dynamics,Fast Terminal Sliding-Mode,Canonical form