عنوان مقاله:

Fuzzy Sliding Mode Control of Electro-Hydraulic Servo Position System

محل انتشار:

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خلاصه مقاله:

This paper presents fuzzy sliding mode controller (FSMC) design for Electro-Hydraulic Position Servo System with parametric uncertainty characteristics and external disturbances. The proposed controller whichcombines the advantages of the Fuzzy control and sliding mode control has the best performance in chattering elimination and decreasing error speed. The design process of the FSMC is using TS method, based on the Lyapunovmethod and introduced in detail. The globally asymptotic stability of the closedloop system is mathematically proved. Simulation results that proposed control scheme has a better adaptability and robustness can improve the control performance greatly

کلمات کلیدی:

Electro-Hydraulic Position Servo System, Sliding mode control, Fuzzy T-S Method, Moving sliding surface, structured uncertainties, chatteringreduction

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