

## عنوان مقاله:

ADAPTIVE INTERVAL TYPE-2 FUZZY SLIDING MODE CONTROL FOR A CLASS OF UNCERTAIN NONLINEAR SYSTEMS

## محل انتشار:

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## خلاصه مقاله:

A stable adaptive interval type-2 fuzzy sliding mode control for a class of nonlinear systems is investigated. The method is based on interval type-2 fuzzy logic system (IT2 FLS) to approximate unknown nonlinear functions. The use of this type-2 control requires an additional operation which is the type reduction, in comparing with typ-1 control. The proposed controller use singleton fuzzifier, product inference engine, center of sets type reduction and average defuzzifier. Based on the Lyapunov method, we design the adaptive interval type-2 fuzzy sliding mode control with mathematical proofs for stability and convergence of the closed-loop system. Two nonlinear system simulation .examples are presented to verify the effectiveness of the (IT2 FLS) that is introduced

## کلمات کلیدی:

Adaptive interval type-2 fuzzy sliding mode, Uncertain nonlinear systems, Type-1 and interval type-2 fuzzy set, Interval type-2 fuzzy logic system (IT2 FLS), Type reducer

## لینک ثابت مقاله در پایگاه سیویلیکا:

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