عنوان مقاله:

Improved Adaptive Type-2 Fuzzy Control for High Dimensional Nonlinear Systems

محل انتشار:

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خلاصه مقاله:

This paper presents an adaptive controller for a class of uncertain high dimensional nonlinear systems by using novel simplified type-2 fuzzy neural network (ST2FNN) and new 3-dimensional membership functions. Adaptation of consequent parameters and stability analysis are carried out using an appropriate Lyapunov function. Moreover, innovative approach is proposed for compensation of approximation error. The proposed method is then simulated on a flexible joint robot in a feedback linearization form. Simulation results demonstrate the effectiveness of the proposed control method.

کلمات کلیدی:

Interval Type-2 Fuzzy, Iindirect Aadaptive Control, Approximation Error

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