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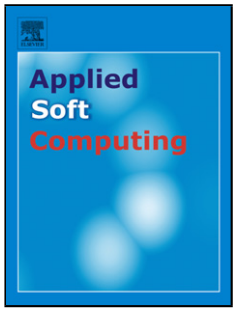

Title: A new Robust Observer-Based Adaptive Type-2 Fuzzy Control for a class of Nonlinear Systems

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Highlights

1) To cope with the problem of the curse of dimensionality, new type-2 3-dimensional membership function is presented.
2) To decrease the computational cost in the type-reduction part, improved and simplified type-2 fuzzy neural network is presented.
3) It's assumed that the all states of the system are unmeasurable, and a robust observer is designed.
4) The effect of external disturbance and approximation errors and state estimation errors are eliminated using the new proposed adaptive compensator.
5) The stability and zero convergence of the tracking errors is investigated using Lyapunov and Barbalat's theorems.