

عنوان مقاله:

Self-recurrent wavelet neural network observer for a class of nonlinear systems using adaptive learning rate

محل انتشار:

اولین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مهندسی برق و کامپیوتر (سال: 1395)

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خلاصه مقاله:

this paper presents a novel nonlinearobserver scheme based on Self-recurrent wavelet neuralnetwork (SRWNN). The proposed network is combinedwith linear observer to estimate unavailable states ofnonlinear dynamic and handle uncertainty in systemparameters. SRWNN is a new structure of wavelet neuralnetwork that has a self-feedback loop in its hidden layersand this characteristic enhances the performance of theproposed observer to overcome severe nonlinearitybehavior in complex systems. Also, this network is tunedonline by backpropagation algorithm and its fast responsedemonstrates the capability of the method in the practicalcase study. The effectiveness of the observer is given insimulation results

کلمات کلیدی:

nonlinear observer, wavelet neural network, learning rate, chaos

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