عنوان مقاله:

NN-MRAS based speed estimator vs. RF-MRAS one: design and comparison

محل انتشار:

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خلاصه مقاله:

This paper is concerned by the use of neural networks and for controlling a non-linear process namely MRAS based speed estimator of induction machine (IM). In the first casestudy, principals of a conventional rotor flux based MRAS (RFMRAS) speed estimator will be designed. In the second casestudy, the design procedure uses a neural model trained with the inverse model of the process. Thus, the overall controlled system is formed using this inverse model. This work analyses eachestimator in terms of tracking and regulation. It is shown that the neural network based MRAS (NN-MRAS) speed estimator isslightly better with respect to the conventional MRAS in the transient while they have quite similar behavior in the steadystate regime.

کلمات کلیدی:

rotor flux based model reference adaptive system(RF-MRAS); neural network based model reference adaptive system(NN-MRAS); speed estimator; sensorless control of IM

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