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Source Type: Conference Proceeding[View references \(17\)](#)**12th IASTED International Conference on Intelligent Systems and Control, ISC 2009; Cambridge, MA; 2 November 2009 through 4 November 2009; Code 80284****Robust-adaptive flux observers in induction motor drive systems**Filote, C.^a , Alexa, D.^b , Pletea, I.V.^b , Micea, M.^c , Ciufudean, C.^a , Cozgarca, A.-M.^a^a Stefan Cel Mare University of Suceava, 13 University Street, 720229 Suceava, Romania^b Gh. Asachi Tehnical University of Iassy, 13 University Street, 720229 Suceava, Romania^c Politehnica University of Timișoara, 13 University Street, 720229 Suceava, Romania**Abstract**

In this paper, we present a comparison of the performances among three rotor flux observers. If the rotor flux is applied as criterion in the vector control of induction motor, the value and direction of the flux needs to be known. Starting from two induction motor mathematical models, this paper analyses theoretically and in terms of simulation, the performances of a conventional rotor flux simulator with a view to the temperature influence of the rotor resistance. Flux observers were used to estimate the flux, since classic methods do not seem to provide acceptable performances. This paper analyses the performances of a robust-adaptive rotor flux observer, starting from a mathematical model and using simulation.

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Engineering controlled terms: Electric drives; Induction motors; Intelligent systems; Robust control; Simulators
Engineering main heading: Mathematical models

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