World Academy of Science, Engineering and Technology International Journal of Computer and Information Engineering Vol:9, No:06, 2015

Direct Torque Control of Induction Motor Employing Differential Evolution Algorithm

Authors: T. Vamsee Kiran, A. Gopi

Abstract : The undesired torque and flux ripple may occur in conventional direct torque control (DTC) induction motor drive. DTC can improve the system performance at low speeds by continuously tuning the regulator by adjusting the Kp, Ki values. In this differential evolution (DE) is proposed to adjust the parameters (Kp, Ki) of the speed controller in order to minimize torque ripple, flux ripple, and stator current distortion. The DE based PI controller has resulted is maintaining a constant speed of the motor irrespective of the load torque fluctuations.

Keywords: differential evolution, direct torque control, PI controller

Conference Title: ICIISA 2015: International Conference on Information, Intelligence, Systems and Applications

Conference Location : San Francisco, United States

Conference Dates: June 07-08, 2015