

Direct Torque Control of Induction Motor Employing Differential Evolution Algorithm

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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 in maintaining a constant speed of the motor irrespective of the load torque fluctuations.

Keywords : differential evolution, direct torque control, PI controller

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