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Direct Torque Neuro Fuzzy Controller (DTNFC) with 3 Level PWM Inverter for Induction Motor

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Abstract – **In present days an induction motor is an essential tool of the industries. So controlling of performance of an induction motor is mandatory in many high performance applications. The scalar control method gives good steady state response, but the poor dynamic response. While vector control method gives good steady state as well as dynamic response. But it is complicated in structure so to overcome this difficulty, direct torque control introduced. Performance of Direct Torque Control depends mostly on the accuracy used to measure the stator flux. The measurement of the stator flux is very difficult to achieve. This paper gives an analysis and Simulation of Direct Torque Neuro Fuzzy Controller (DTNFC) with 3-level PWM Inverter for Induction Motor. A Neuro-Fuzzy inference system is applied to achieve high performance stator flux and torque control. Simulation is carried out using MATLAB 2010a.**

Keywords – **Direct Torque Control, Direct Torque Neuro Fuzzy Controller, Induction Motor, Neuro-Fuzzy inference system, PWM.**