

# **Abstract**

## **Sensorless Direct torque control of an Induction Motor Using Fuzzy Controller**

In this paper direct torque control DTC of induction motor is developed. A new technique for DTC based on fuzzy logic concept, where fast torque response with low ripple in the stator flux and torque of induction motor can be achieved. In comparison with conventional DTC simulation results clearly demonstrate a better dynamic and steady state performance with the fuzzy logic DTC. The two approaches are explained in clear details, which are designed using Simulink under Matlab Ver.6 software package. Also, Matlab/Fuzzy toolbox is used to implement the fuzzy logic controller. Both systems are simulated under the same conditions.