# Abstract

## Mohamed I Abu El-Sebah

## Fault Diagnostics in an Inverter Feeding an Induction Motor

This paper presents a fault diagnostics system for a three-phase voltage source inverter. The system is developed as a rule-based fuzzy logic system for fault cases of the inverter power semiconductor switches. Based on a time domain simulation model, the inverter different fault conditions are simulated with the resulting voltage spectrum providing the database for the fuzzy logic system. The developed fault diagnostics system is capable of identifying the type and location of the inverter fault.