Abstract

There has been big interest in switched reluctance motor (SRM) due to its simplicity and reasonable cost, however excessive torque ripple is one of the major disadvantages of switched reluctance motor. This paper attempts to reduce torque ripples of Switched Reluctance Motor through building multi-layered motor controlled by a hybrid intelligent system known as Adaptive Neuro-fuzzy Inference System ANFIS. Simulation of the proposed motor is conducted using Matlab Simulink environment 2011 and comparison results with single layer switched reluctance motor for both PI and ANFIS controllers show improvement in behavior of MSRM controlled by ANFIS through reduction in speed settling time as well as torque ripples.

References


Index Terms

Computer Science

Artificial Intelligence
Keywords
Multi-layer Switched Reluctance Motor; SrM; Torque Ripples; ANFIS