Abstract

Switched Reluctance Motor (SRM) has simple and solid construction, low-cost, good reliability at high temperatures, and large torque density. Yet, the higher torque ripple from magnetic saliency is a severe problem. This paper experimentally verifies the performance of a switched reluctance motor, the integrated noise removal filter does not require any mathematical modeling of the noise and therefore, can be used effectively to control non-impulsive-type noise. An analysis with the noise and error commonly found in practical motor drives is given, it is shown using experimental results that the NRF scheme can cope well with erroneous and noisy feedback signal and interfacing STM-32 ARM processor.

References


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Index Terms

Computer Science
Fuzzy Systems

Keywords

Switched Reluctance Motor (SRM)  Noise Removal Filter (NRF)  Pulse Width Modulation (PWM)

STM-32 ARM Processor