Abstract

This paper introduces a new technique for controlling the speed of Permanent Magnet Synchronous Motor (PMSM). This technique depends on two well known control methods; the first control method is known the variable structure system (VSS), which has a main advantage known as an sliding mode property. The second method depends on fuzzy logic control. A combination between the two mentioned above methods is suggested in this paper. In addition for simplifying the suggested technique, the model of PMSM is decoupled. Simulation results illustrate the validity and the effectiveness of the new suggested technique.
Decoupled Fuzzy Sliding Mode Control for a Synchronous Motor Speed Control

365–385. New model and sliding-mode control of hydraulic elevator velocity tracking system

**Index Terms**

Computer Science  
Control Systems

**Keywords**

Decoupled  
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