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Implementation of a Predictive DTC-SVM of an Induction Motor

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Abstract : Direct torque control is characterized by the merits of fast response, simple structure and strong robustness to the motor parameters variations. This paper proposes the implementation of DTC-SVM of an induction motor drive using Predictive controller. The principle of the method is explained and the system mathematical description is provided. The derived control algorithm is implemented both in the simulation software MatLab/Simulink and on the real induction motor drive with dSPACE control system. Simulated and measured results in steady states and transients are presented.

Keywords : induction motor, DTC-SVM, predictive controller, implementation, dSPACE, Matlab, Simulink
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