

Space Vector PWM and Model Predictive Control for Voltage Source Inverter Control

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Abstract : In this paper, we present a comparative assessment of Space Vector Pulse Width Modulation (SVPWM) and Model Predictive Control (MPC) for two-level three phase (2L-3P) Voltage Source Inverter (VSI). VSI with associated system is subjected to both control techniques and the results are compared. Matlab/Simulink was used to model, simulate and validate the control schemes. Findings of this study show that MPC is superior to SVPWM in terms of total harmonic distortion (THD) and implementation.

Keywords : voltage source inverter, space vector pulse width modulation, model predictive control, comparison

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