

عنوان مقاله:

Investigating the Effect of Parameters on the Dynamic Behavior of Permanent Magnet Stepper Motor Using State Space Analysis

محل انتشار:

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خلاصه مقاله:

Stepping motors are normally operated without feedback and may suffer from loss of synchroni-zation. The permanent magnet stepper motor (PMSM) is generally two-phase. In this paper, the nonlinear dynamic equations governing the performance of the permanent magnet stepper motor are linearized at an operating point for small signal stability studies. Small signal stability is the system ability to maintain synchronism when a small disturbance occurs. It is based on the state space averaging approach. A detailed description of the method, results, and conclusions are also presented. Finally, simulation results for three motors have been reported and compared

کلمات کلیدی:

eigenvalues analysis, linearized model, mode system, permanent magnet stepper motor, state space

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