Abstract

One of the most problems of nonlinear mechanical system that limit the performance of the position and speed control is backlash, a controller used in this paper is applied to an induction motor includes a gear, the main purpose of this paper is to study the effect of backlash on the performance of the motor and the goal is tracking speed trajectory, the paper described a comparison of controlling three phase induction motor using PI controller and sliding mode control under the effect of backlash and load torque variations, the simulation is implemented using MATLAB/ SIMULINK, the performance of the system is illustrated via simulation.

References

3. N. Sanchez , Alexander G. Loukianov "Discrete-Time Neural Block Control Using Sliding Modes for Induction Motors with Gears"
Index Terms

Computer Science

Applied Sciences
Keywords

induction motor- backlash-variable structure system