

Review of sliding mode control of robotic manipulator

ABSTRACT

Control of robotic systems is vital due to wide range of their applications because this system is multi-input multi-output, nonlinear and uncertainty. Consequently, it is difficult to design accurately mathematical models for multiple degrees of freedoms robot manipulator. Therefore, strong mathematical tools used in new control methodologies to design a controller with acceptable performance. As it is obvious stability is the minimum requirement in any control system, however the proof of stability is not trivial especially in the case of nonlinear systems. One of the best nonlinear robust to control of robot manipulator is sliding mode controller. A review of sliding mode controller for robot manipulator will be investigated in this paper.

Keyword: Robotic system; Nonlinear system; Robust controller; Sliding mode controller