

Abstract

Fuzzy Logic Control (FLC) has been successfully established in control systems engineering in the recent years, in other hand, Sliding Mode Control (SMC) is an active area in control research. The combination of this two fields called Fuzzy Sliding Mode Control (FSMC) techniques to exploit the superior sides of these two controllers have drawn the attention of the scientific community. In this work, we proposed fuzzy logic controller based on the sliding mode theory to control the robot arm actuated by the pneumatics artificial muscles. Using bang-bang motion generation law, the objective of the control is the position and the velocity tracking by the robot. Simulations results demonstrate the feasibility and the advantages of our proposed research work