Abstract

This paper proposes an intelligent control approach towards Inverted Pendulum in mechanical engineering. Inverted Pendulum is a well known topic in process control and offering a diverse range of research in the area of the mechanical and control engineering. Fuzzy controller is an intelligent controller based on the model of fuzzy logic i.e. it does not require accurate mathematical modelling of the system nor complex computations and it can handle complex and non linear systems without linearization. Our objective is to implement a Fuzzy based controller and demonstrate its application to Inverted Pendulum. Model design and simulation are done in MATLAB SIMULINK® software.
- J. R. White, System Dynamics: Introduction to Design and Simulation of Controlled Systems, Online literature.
- Ashab Mishra, Iram Mahboob and Capt. Dr. Sarfraz Hussain, "Flexible Broom
Control of Non-Linear Inverted Pendulum using Fuzzy Logic Controller


Index Terms

Computer Science
Control Systems

Keywords
Inverted Pendulum  Fuzzy logic  Fuzzy controller