Abstract

This paper presents the comparison of tracking control performance of fuzzy PI Controller with fuzzy PID and conventional PID controllers. Fuzzy PI controller and Fuzzy PID controller composes of Mamdani type fuzzy controllers and parameters are adjusted to meet the desired control system performances both in transient state and steady state. Computer simulations are done for controlling the time delay, Nonlinear, and Linear systems by using fuzzy PI, fuzzy PID and the conventional PID controller are shown in this paper. The effectiveness of fuzzy controllers over the conventional controller are shown by choosing Gaussian, triangular, pi input fuzzy sets.

Reference


**Index Terms**

Power Electronics  
Control Systems

**Key words**

FOPDT (First Order plus Time Delay)  
Fuzzy control Fuzzy PI controller

Fuzzy PID controller

Membership functions