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.
Control of Non-Linear Inverted Pendulum using Fuzzy Logic Controller

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\textbf{Index Terms}

Computer Science  
Control Systems

\textbf{Keywords}

Inverted Pendulum  
Fuzzy logic  
Fuzzy controller