



Mahmoud Norouzi

Research Interest

- System Identification
- Control Engineering
- mechatronic systems
- Neural network
- Fuzzy logic

Thesis Title:

Closed Loop Identification of Two Wheel Inverted Pendulum Mobile Robot

Abstract:

The process used in this project is the Two-Wheeled Inverted Pendulum system. The characteristics of the inverted pendulum make modeling and control more challenging. The inverted pendulum is a highly nonlinear and open-loop unstable system. This means that standard linear techniques cannot model the nonlinear dynamics of the system. Thus, system identification has been introduced as an alternative modeling approach. System identification is the procedure that develops models of a dynamic system based on the input and output signals from the system. The parameters of the model are adjusted until the output from the model is similar to the output of the real system. In order to develop an accurate model of the inverted pendulum, different methods (linear and nonlinear) of identification will be tested.

.

Supervisor:

Dr.Mohammad Teshnehlab

Dr.Mahdi Aliyari

Contact:

Norouzi3@gmail.com