

Hi All,

The following problem is homework 5.

Hw5

In this homework, you are going to design a PID controller to control the inverted pendulum model in homework 4.

- 1) Use ode45 to simulate the output response in time-domain.
- 2) Use Simulink to simulate the output response in s-domain.
- 3) Report

Try to find a proper K_p , K_i , K_d for your controller.

For this homework, you should additionally submit a report including your analysis.

Try to find the reason if you can't get the expected control goal.

Please noticed:

For HW5, please submit four files:

1. Simulink.slx file (file name: HW5_StudentID.slx)
2. code.m file, (file name: HW5_StudentID.m)
3. result.pdf file (file name: HW5_NAME_StudentID.pdf)
4. parameter.m file

Due date: 6/4

The following attachment is the reference for simulink-PID. Please Check!

The reference ppt is just a guideline for you.

You are welcome to create your own parameters and code. Remember to find your reasoning in your report.

Best,

TA