SSY281 Model Predictive Control

Micro-homework 2

Basic Control

Deadline: January 29, 10:00

Systems & Control
Department of Electrical Engineering
Chalmers University of Technology

January 2019

Instructions

This assignment is **individual** and must be solved according to the following rules and instructions:

- Written report:
  - It should be one page with pdf format.
  - The report should be uploaded *before the deadline* to your project document area in PingPong.
  - Name the report as MA2_XX.pdf, where XX is your *group* number.
- Grading:
  - This assignment is *pass* or *fail*.

Question 1. *Describe the closed-loop stability properties of an infinite-time LQ controller and a finite-time LQ controller in receding horizon.*

Question 2. *How can stability of a finite-time LQ controller in receding horizon be enforced?*

Question 3. *Explain the main advantage of a DP solution of a finite-time LQ problem vs. the batch solution.*