

## **Supervisor meeting**

Thursday, 31st of March 2016

### **Sense Tool Parameter Estimation**

- The slower damping of the model, is due to stiction.
- When using SenseTool to estimate the parameters, make sure to describe the method used by the tool.
- In general, use Newton method first then steepest descent.

### **Potentiometer**

- Resolution of the potentiometer, 0.486 V over a range of 90.35 degrees.
- Maybe there is a gain in the AD-converter - talk to Simon.
- Maybe we can increase the voltage across the potentiometer.
- Remember to document everything.

### **Motor**

- The controller on the motor is a closed loop current controller (input: current reference (PWM)).
- Measure how fast the closed loop is.
- In the motor documentation the closed loop current controller sampling time is 53.6 kHz.
- However the closed loop response time is what is interesting in this case.
- We have to argue in the report - we have back EMF, which changes the current
  - how good is the loop at rejecting this?
- There is probably a limit on the speed in the code since the motor can go really fast.

### **Controller**

- Priority next is to start implementing the controller.
- When describing the Root Locus design, argument how the loci are changed according to new pole/zero placements.
- Also include information on general Root Locus design

### **Next Supervisor meeting**

Send material on Monday, 11th of April

Prepare 7 to 10 minutes of presentation each

Wednesday, 13th of April at 13.00