# Supervisor meeting

**27th of November 2015**

## Problem with SD card

- It is not so important, so fine to cut it because of time constraints.

## Magnetometer

- Calibration of the offset worked
- Fixed the incoherence problems due to external magnetic fields (wires, battery and other metallic objects moving around the sensor)

## Steering test

- Good job with has been done for the steering test yet
- A problem was found during the test; the steering is not consistent, maybe because of heating brakes
- Maybe we are lucky, and the controller will fix the problem
- Try making 10 test and see the difference between them
- Just jump out to it : try to estimate, test it and adapt it accordingly
- There should be a integrator in the steering model, which should result in a type 1 system
- Integrator is depending on the velocity : use an operating point (assume constant speed)
- The black box drawn yet looks correct
- The time constant should vary according to the velocity
- When making this linear, the speed shall be kept constant. P controller
- Don't use too much time on different types of controller
- Make an inner loop to measure the angle and an outer loop the distance to a determined line

## Velocity part

- There are just few comments, but otherwis it is good
- Be consistent regarding the terms in equations: clarify which are constant wich are varying depending on time
- In Equation 5.20, the $2 \cdot \pi$ should not be there (same thing for other equations)

- $L_a$ can not just removed because it is small, but because the associated pole is much less important/far from the dominant pole/out of the range of passing frequencies for our system to show the difference between 1st and 2nd order
- In Figure 5.13 :
  - Rounding errors have gave a velocity smaller than 0
  - More explanation about the delay in 5.13
- Make a step down

## Signal processings

- If we really want to make a filter, make a really fast sampling on the hall sensor, so it could make it there

## Next Supervisor meeting

Next Friday (4th of December) at 12.30