

## **Supervisor meeting**

Wednesday, 20th of April 2016

### **Requirements**

- Problem formulation rather than requirements
- Instead of setting random requirements we investigate how far the boundaries of control can be pushed while comparing different controller designs.
- Of course a requirement of stabilization is still needed.

### **Controller Design**

- Go to State Space
- Afterwards go back and investigate the previous design methods:  $y = \theta + k\omega$  and Direct Design Method of Ragazzini (Coefficient Matching).

### **Bode Plots of Discretized Controller**

- The Tustin discretized controller has a  $-360^\circ$  offset in the closed loop plot.
- No reason to show the closed loop plot.
- One argument for Tustin with prewarp is that it has realizable poles.
- Tustin with prewarp is also better than Tustin without prewarp on the open loop plot.
- Phase range is better with Tustin with prewarp no matter what - choose Tustin with prewarp.

### **Next Supervisor Meeting**

Wednesday, 27th of April at 13.00