

Projects in System Identification 2011

A Few Suggested Project Outlines

- Identification of a flexible servo
- Identification of a helicopter model
- Identification and modeling of the ball-and-beam process—The position loop
- Parametric robot identification
- Motor drive with speed and tension control
- A servo with backlash
- Econometric identification
- Friction models for servo mechanisms
- Inverted-pendulum dynamics
- A fan process

Procedure

- Modeling
- Experiment planning
- Identification: At least two “independent” methods should be used.
- Validation:
 - Statistic criteria
 - Simulation
 - Control (if relevant)
 - Legible, nice, type-written report and a short oral presentation

Organisation

- Three students in each project team
- Instructors: Rolf Johansson, Meike Stemmann, Andreas Stolt.

Examination

An oral report in class should take place on **Friday, April 29, 10.15 a.m.** (or at another time to be decided). Final project reports should be submitted no later than this date.

- Examiner: Rolf Johansson
- It is required that the project is accepted to fulfill course requirements
- A well done project may improve the final grade by one unit

Laboratory and computer resources

- Project laboratories A with computers are available with the following software: Matlab.