

# **Final Project**

## 1. Objective

The objective of this project is to design a closed-loop control system that makes use of a controller (analog or discrete) to control a single-input single-out (SISO), or even a multi-input multi-output (MIMO) system. The choice of the controller: P, PI, PID, Lead, Lag, etc., as well as the design method: time domain, frequency domain, or state-space, is left up to you what method to use to use.

### 2. Deliverables

Keeping in mind a particular problem/project, and before you start the design, you need to submit a proposal

#### 2.1 Proposal

One-page document containing three main points: a) the problem, b) methodology (controller type, design method, analog or discrete), c) hardware/software to be used in the design. The proposal will not be graded, but it will be used to standardize the degree of complexity of the projects amongst all teams.

#### 2.2 Final Presentation

The presentation on the project will be graded (10 points) and will consist on a 10-minute talk which may include: a) title of the project, members of the team, date, etc, b) description of the project, c) design methodology, d) plots of simulations and actual results, e) future work and recommendations.

#### 2.3 Final Report

The report will be graded (10 points) may have the same format. However, the length of the report should be equal to 7 or less pages.