Project Assignment:

Please come to office hours with your group to discuss about your topic on the final project.

Please bring the following:

- At least three papers related to your topic which include modeling and/or control.

- Bring a summary (oral is fine) for each paper.

- Describe the model inputs/outputs/states. If possible, write them in the standard linear/nonlinear dynamic system form:

$$\frac{d}{dt}x = f(x, u)$$
$$y = g(x, u)$$

  where $x = [\cdots], u = [\cdots], y = [\cdots]$.

- Evaluate how feasible is the modeling approach proposed. For instance, do they provide all the necessary equations? Are there values given in the paper for all the parameters? Do they use a solver other than Matlab/Simulink for modeling?

- Describe the control strategy used in the papers (PI, LQG, MPC, etc.).

- Describe the control objective. For instance, "*in the idle control problem, the controller will adjust spark and throttle ($u = [\sigma \quad \theta]^T$) in order to maintain a constant engine speed ($y = N$)* ".

- Describe the results discussed in the papers. Did they achieve the control objective?

Grading rubric for final report:

The general idea is that you will replicate the results of at least one paper. On top of that, you will extend the literature review (usually found in the "Introduction" section) based on the rest of your papers selected. The "Conclusion" section will come from your personal experience modeling the system and developing a controller.