

MCE/EEC 647/747

Final Project Selection - Spring 2017

Project Commitment Due 4/6/17

Project Options: Students may choose one of the following:

1. Paper analysis and simulation: A published journal article or sufficiently advanced conference paper will be selected by the student or the instructor. The student must gain enough understanding of the paper to reproduce the simulations. The paper must be concerned with control and/or estimation for robot manipulators. If selecting this option, propose your paper by Thursday, 3/30 so it can be confirmed by the instructor.
2. Ongoing research project (Dr. Richter): Students will apply the techniques learned in this course to their research problems.
3. Ongoing research project (other advisors): Students may propose a project where the control or estimation techniques of this course are applied to some aspect of their research. Model-based simulations are required, with optional experiments in their own hardware.
4. Modeling, simulation and control of a robotic manipulator: The robotic manipulator of HW3/HW5 will be controlled in simulation with a robust controller and an adaptive controller. The instructor will provide numerical parameters and design requirements.

In all cases, a 2-page (max) description of planned activities is due on 4/4/17. All projects are individual. Final presentations will take place on 4/27, 5/2, 5/4 and 5/9. Attendance is mandatory for all presentations, all students. A final report is due on 5/12/17.