Course Project Information

Demo & Showcase Date: **Friday, May 30, 1:30 PM**
Location: **Peterson (Building 550), Grove area of Atrium**

The course project is worth a total of 40% (40 points) of your final grade in CS277. As Experimental Haptics is a project-based course, you are expected to pursue an in-depth study of some aspect of haptics, in lieu of writing midterm or final examinations.

The suggested final project for the course is a haptics-enabled video game, simulation, or implementation of an advanced algorithm or technique described in a research paper. Some examples are interactive physics/dynamics simulations, collaborative or competitive haptics over a network, and rich haptic environments that require a combination of rendering techniques. Alternative projects may be undertaken, subject to instructor approval, provided they are of comparable scope and sufficient depth.

Course projects may be completed individually or with a partner as a team of two. The final project should use either one or two Novint Falcon haptic devices on a single computer or two networked computers, unless otherwise arranged and approved.

Grades for the final project will be allocated as follows:

- Project proposal (5 points)
- Project milestone (5 points)
- Project demonstration and report (30 points)

The requirements for each component are described in the sections that follow. **Note that late days may not be used for any component of the course project!**

Project Proposal (5 points)

Due Date: **Tuesday, May 6, 11:59 PM**

Write a one- or two-page proposal describing what you intend to develop for the course project. Describe succinctly the goal of your project and the methods and algorithms you will intend to employ to achieve that goal. Include pictures, diagrams, and references as appropriate. If possible, identify a milestone at a mark approximately half way to completion of the project to help you pace the work.

Submit your proposal by sending it to cs277.2014@gmail.com before the specified due date. The proposal will be evaluated on the clarity of writing and presentation of ideas. The instructors will use the proposal to ensure that the scope of your project is appropriate for the course, and will provide suggestions to help you formulate the best project possible.

Project Milestone (5 points)

Due Date: **Lecture Period, May 20 or May 22**

You will be expected to give a brief presentation of your project goals and intermediate results in class during the week of May 19-23. Once we receive the project proposals, we will post instructions for signing up for an 8-minute presentation slot during one of these two lectures. Prepare two or three slides to help you describe your project to the class, but save five minutes to give a demonstration of your project at its intermediary stage, and to answer questions from the instructors or your classmates.

At this point in time, the fundamental aspects of your project should be in place and working reasonably well. You will receive credit for the project milestone if you are able to demonstrate substantial progress toward achieving your project goals by this milestone date. This would also be an opportune time to schedule office hours with the instructors to discuss any challenges or issues you may have encountered thus far working on your project.

Project Demonstration & Showcase (30 points)

Due Date: **Friday, May 30, 1:30 PM**

You will be giving a demonstration of your final results in a project showcase to be held in the Building 550 atrium grove area on May 30th, 1:30–3:00 PM. The showcase will be run jointly with the "Design and Control of Haptic Systems" course (ME327), and many distinguished guests will be invited to attend. Prepare the best presentation you are able to, as your project will potentially receive a lot of exposure. The project showcase will also be the instructors' primary opportunity to evaluate your project.

Write a one-page abstract that succinctly describes your project and submit it to cs277.2014@gmail.com by Thursday, May 29. This abstract will be printed and distributed, and will be the primary means by which the instructors and guests will have to remember your project. You are not be required to turn in a comprehensive project report so that you may focus your time on the implementation of the project instead. Final projects will be graded on creativity, technical merit, artistic merit, quality of implementation, and most importantly their use of or relevance to haptics.

If you have an unavoidable schedule conflict for May 30th, please inform the instructors well ahead of time to make alternate arrangements for demonstration and grading of your final project.