

**Computer Science 805**  
**Spring 2006**  
**Project 3 – Advanced Ray Tracer**

**Due: Thursday, 4/6/2006**

### **Overview**

This project requires advanced enhancements to your ray tracer. You have some flexibility on what improvements to make, so try to work on features you find interesting.

### **Description**

Select one enhancement from the following list:

- depth of field
- soft shadows
- gloss

Select two additional enhancements from the following list:

- adaptive antialiasing or jitter
- bounding boxes
- uniform/non-uniform spatial subdivision for acceleration
- surfaces of revolution (research on your own)
- animation

Create several images that show and show off all of the features you implemented. Submit the scene files for grading purposes.

### **Submission Requirements**

You should create a web page with the following:

- your name, the date, and a title/description of this project
- several scenes of your own design and the resulting images your code produces
- any accompanying comments describing your source code
- instructions on how to compile and run your code
- any interesting problems you encountered and how you resolved them

Additionally, you will give a short presentation in class showing some of the images you produced and discussing any interesting problems you uncovered and how you resolved them. Source code (tar'ed and gzip'ed) should be submitted by e-mail.

You will be graded on the source code you submit, output images, the web page presenting your results, and your presentation.