

## **ECE 661**

### **Homework 7**

(Optional, but if you do it well, you could earn 10% of your final evaluation score for this course.)

**Due December 12, 2006**

Implement the self-calibration and metric reconstruction algorithm of Pollefeys, Koch, and Van Gool and show a metric reconstruction from 8 images of a scene. You can assume that the camera skew is zero.

The beauty of the PKV approach is that it carries out both affine corrections and similarity corrections to a projective reconstruction in a single shot.

As will be explained in class, this approach is based on the idea that if you restore the Dual Absolute Quadric to its standard form, you would recover a metric reconstruction of the scene.