Homework 3 , EE290T; due on Nov. 29th

In this homework, you are going to texture map three planes corresponding to walls in a building interior. For each wall you are provided with the equation of the wall, its extent, and the approximate pose of images that can potentially be used to texture map it. If you just map the images as is onto the walls you will see significant discontinuities across images. Your task is to generate a complete texture mapped wall so that the seams between images is invisible. Note that the provided poses for images are only approximate, and not 100% accurate.

Hints: walls are planar and as such homographies are useful in texture mapping them. See Section 9.1.1 of Rick Szeliski’s textbook; you can use open cv as needed. Chapter 13 of Hartley and Zisserman can also be invoked. Do not forget to use Ransac to remove outliers.

What to hand in: snapshots of the three texture mapped wall; code; write up as to what approach you took to solve this problem.