ECE 5554
Theory and Design of Computer Vision Systems

Fall 2005, 3 credits, CRN: 95427

HW#5

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1. Write software code that takes an input image and then performs the following two transformations in a sequence: rotate the image 30 degrees about the center; perform a mirror image of the image about the vertical line passing through the center. Take the input file as lena.pgm and create two images after each transformation performed sequentially.
2. Write software code to create the optical flow field for figure5_2a.pgm and figure5_2b.pgm using algorithm one of motion1.pdf lecture notes. Make any appropriate assumptions necessary and choose your own constant values such as the weight in the objective functional. Draw the optical motion field on figure4_2a.pgm. Choose your own method for indicating the field. You can choose some points on the image to show the field (you don't have to show it at every point). You can even do this by hand or using some drawing software after the program calculates the flow.