BLG 453E Homework 3 Report

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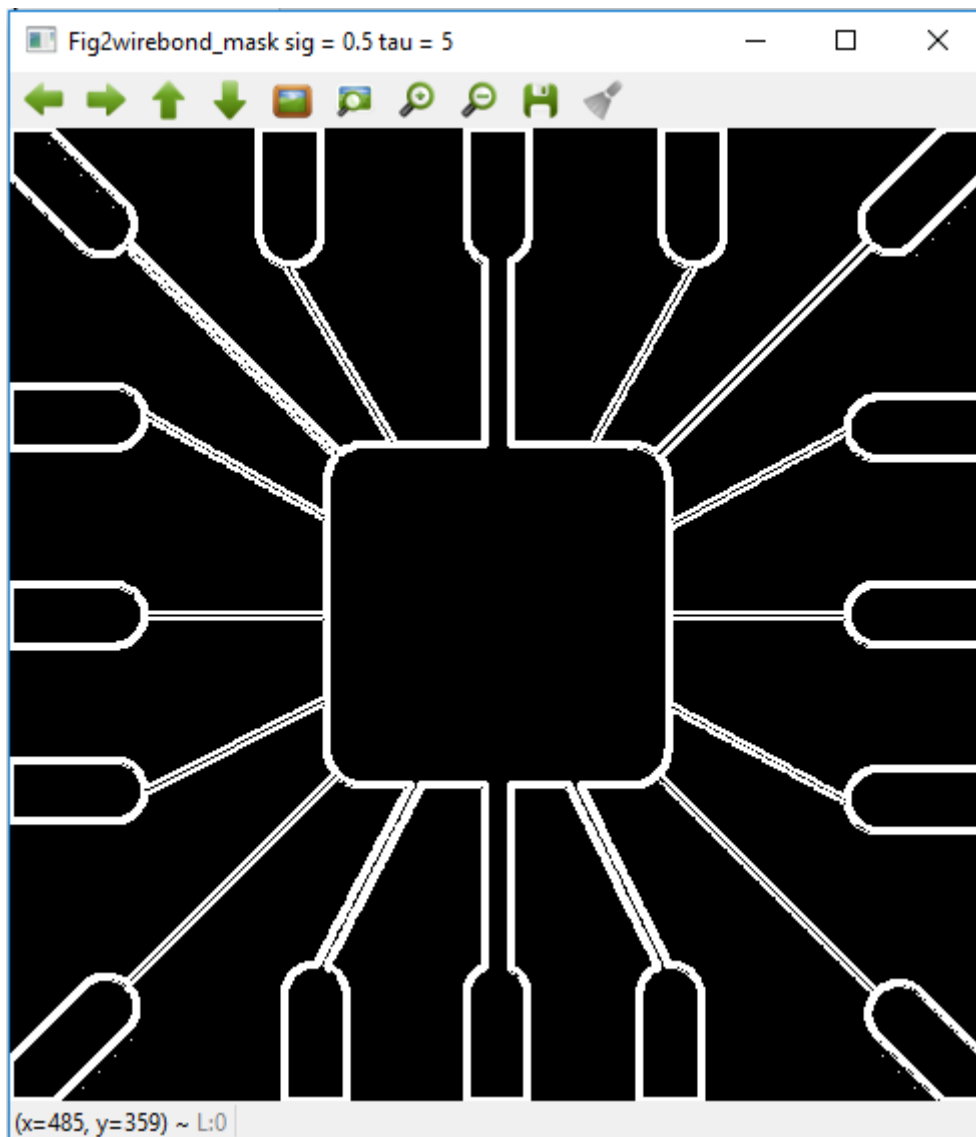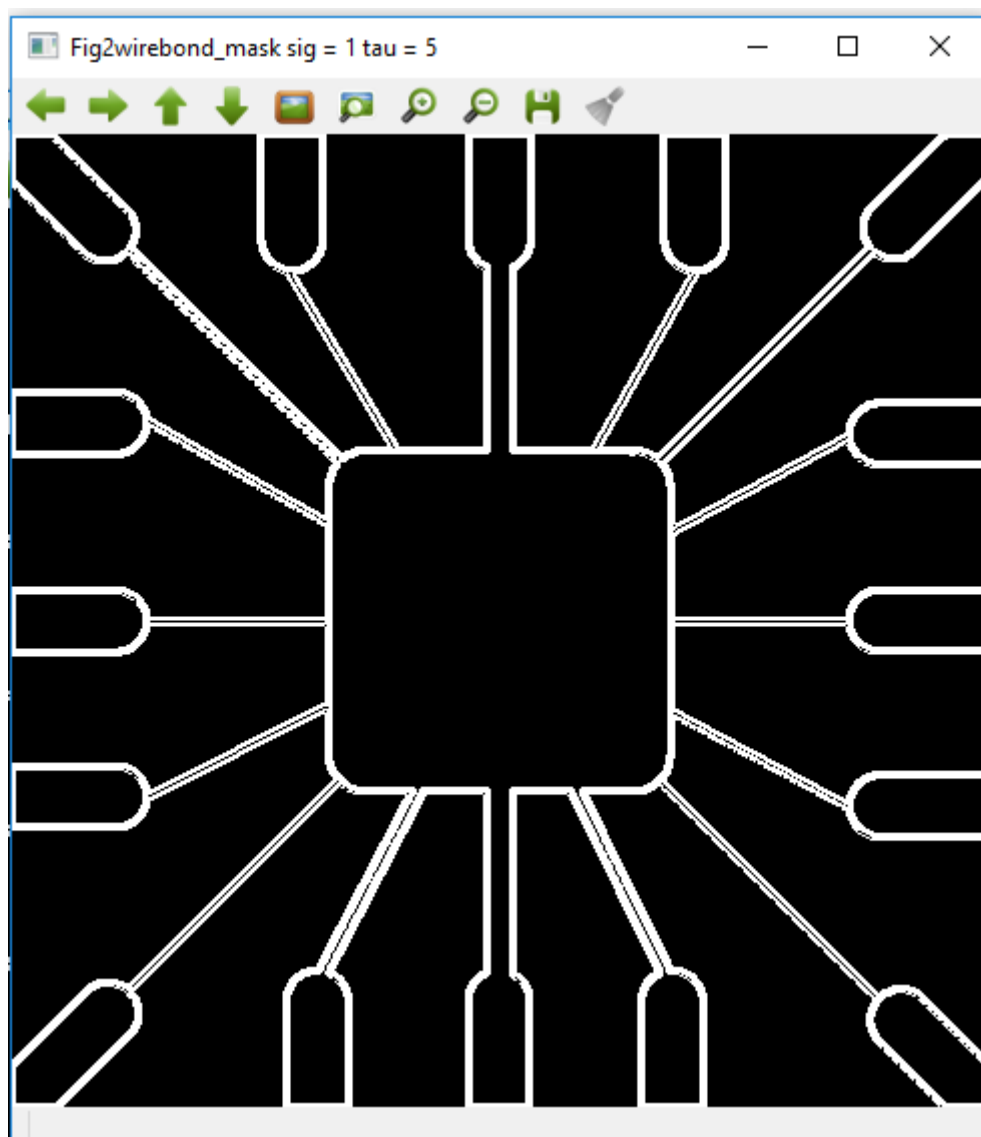# 1-

How to run:

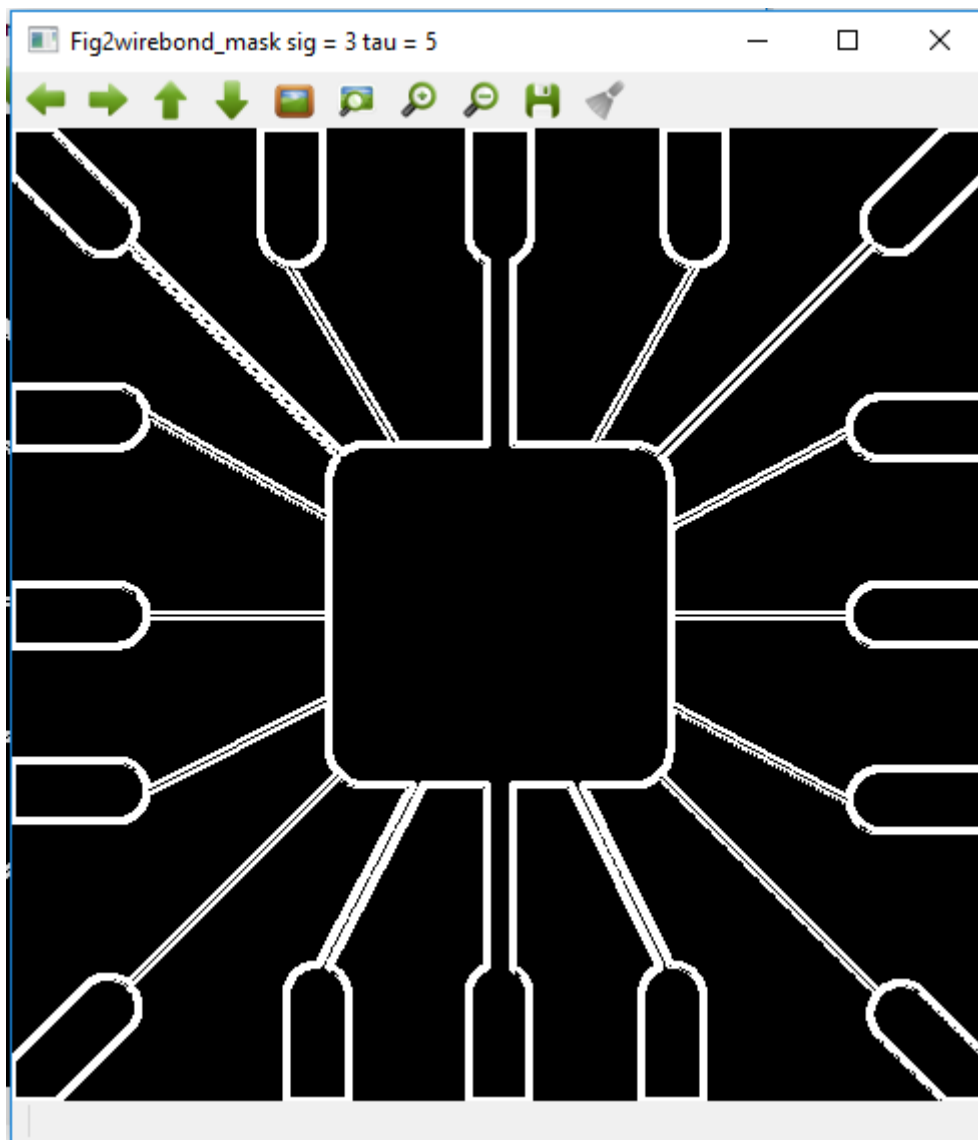Run Hw3_Q1.py

After every photo stack, press 0 to get next stack in the order of Question 1

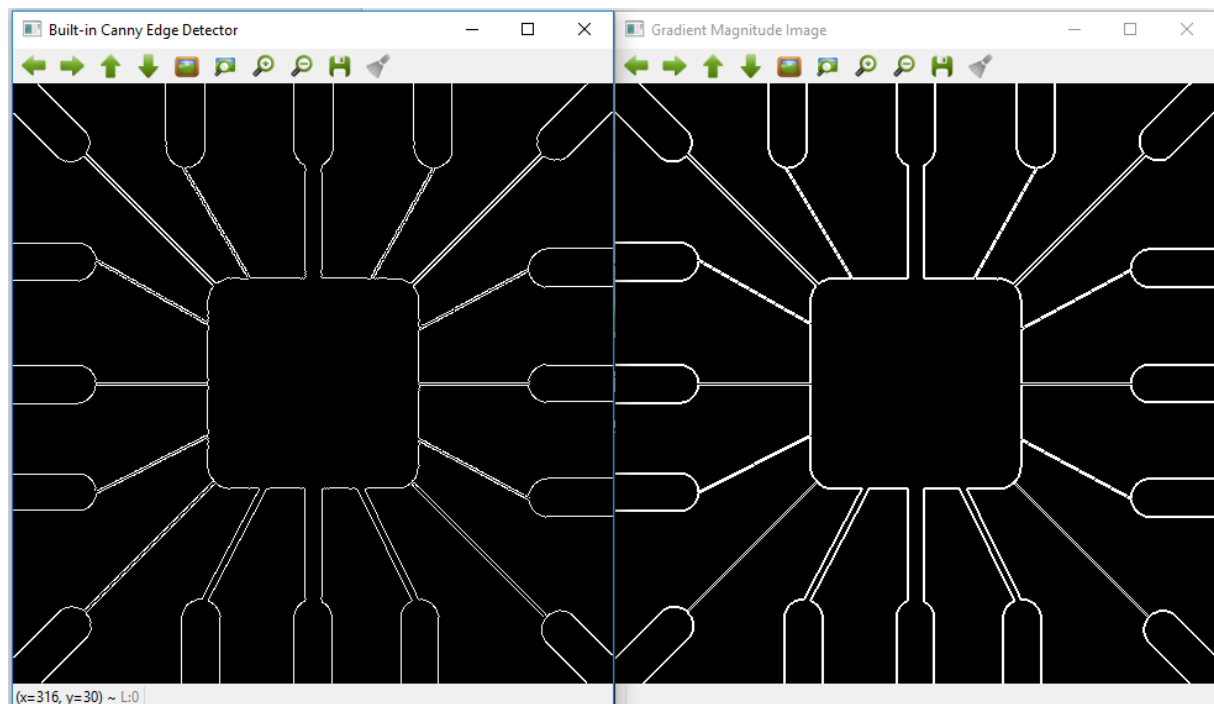**a)** Can be inspected from code, works succesfully.

b)

Fig2wirebond_mask sig = 1 tau = 5

Fig2wirebond_mask sig = 3 tau = 5

With increasing variance, more noise reducted edge detection achieved.

c)

That much of a detection is achieved for values sig = 1 and tau = 15.

d)

Implemented image gradient oprerator seems to be smoother than the built in canny edge detection function. One of the reson is application of threshold to implemented operator.
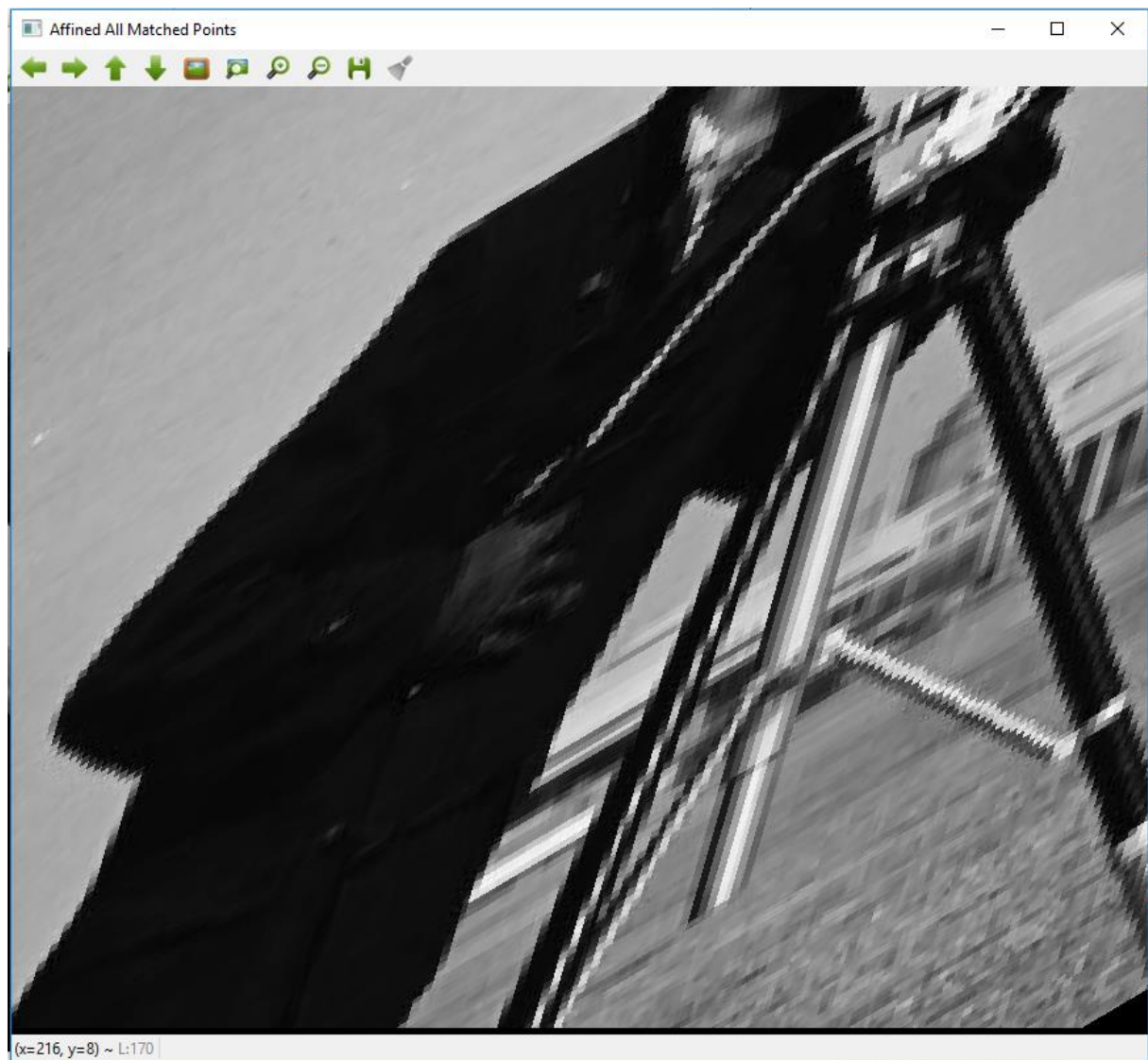
2)

a)

b)

with all matched points: a11 = 0.531435123121 a12 = 0.151988549709 a21 = 0.353912638235 a22 = 0.598473073763

with corresponding points in Best Matches: a11 = 0.531435123121 a12 = 0.151988549709 a21 = 0.353912638235 a22 = 0.598473073763

c)

Transformation with all matched points:

Transformation with best matched points:

While matching with built-in Sift function, some errors could be inspected from "Matches" output, when the affine transform matrix is calculated with respect to these matched, iti is inevitable to see errored output. On the other hand, the output of affine matrix that calculated with correctly matched points is very close to originally affined figure. The main reason of error is seemingly but not really matched matching points found by sift.