

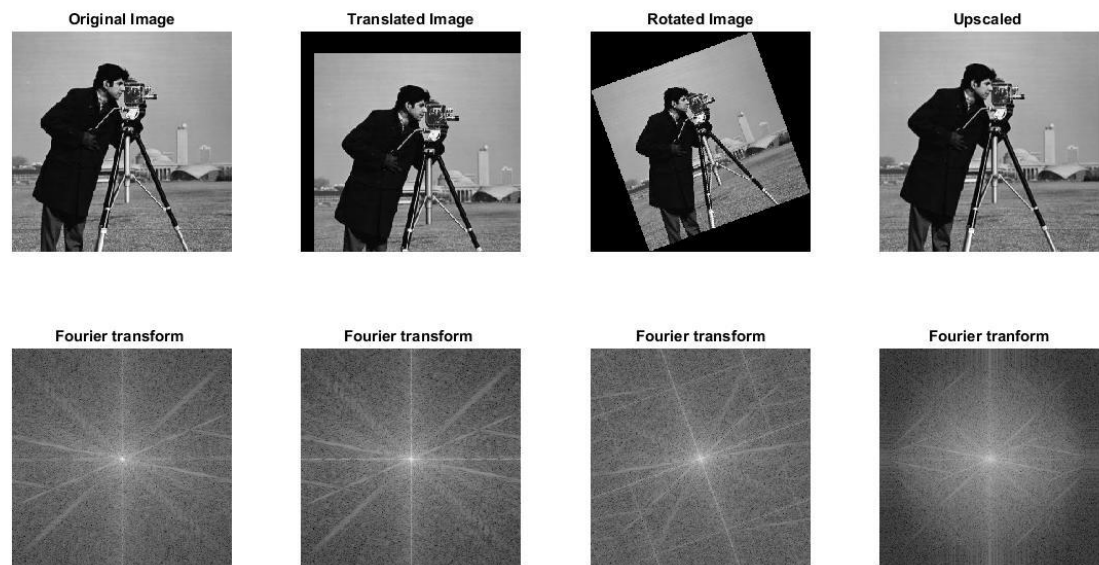
ELL715

Assignment 3 – Report

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2013MT60079

1. Fourier Transform (Code in q1.m)

Image modifications and their fourier transforms



Low Pass filter:

Low pass, $\sigma=2$ Low pass, $\sigma=0.5$ ideal Low Pass Filter



Butterworth Low Pass Filter



Butterworth High Pass Filter



Original question



High pass Filter



High pass Filter



2. Edge Detection (Code in q2.m)

Original Image



(a) Laplacian filter (a) With diagonal terms (b) Robert's operator



(c) Sobel's operator



(d) High pass filter



(e) High boost filter



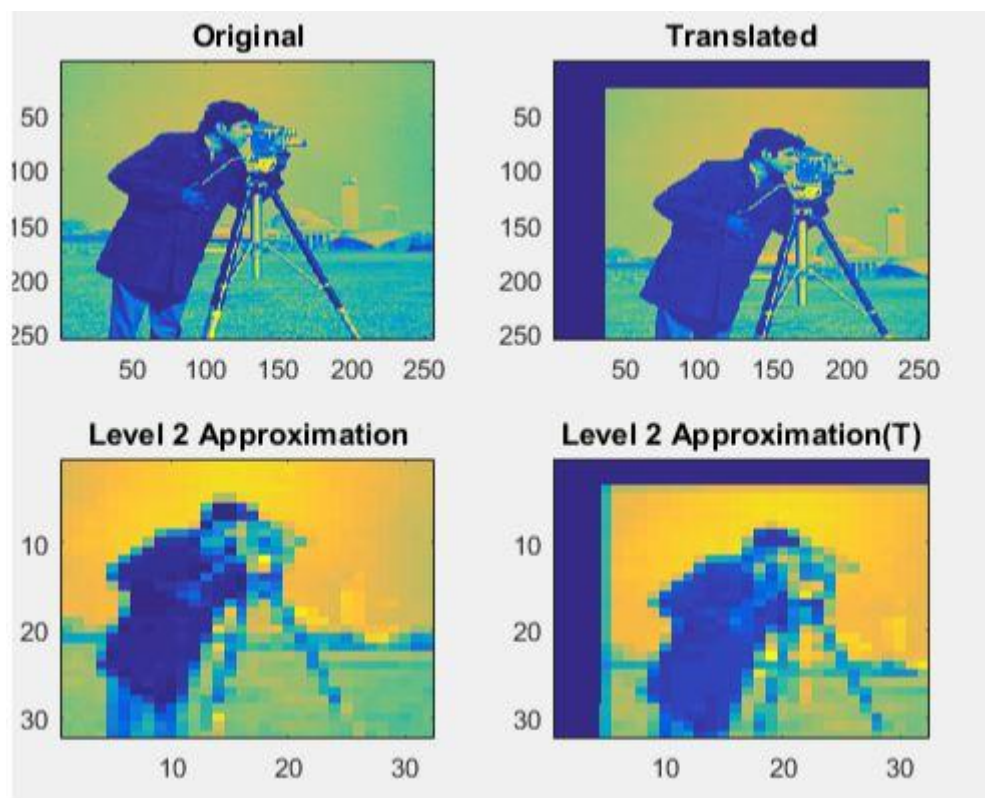
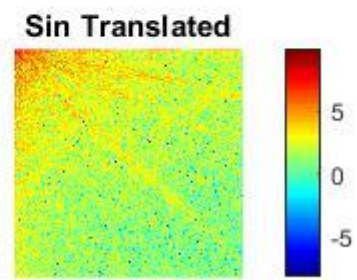
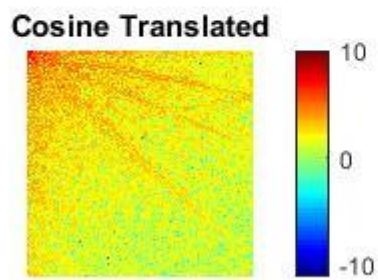
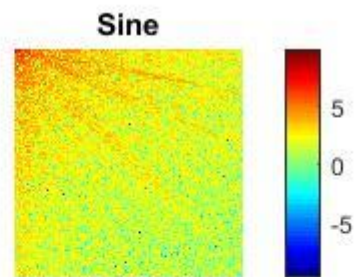
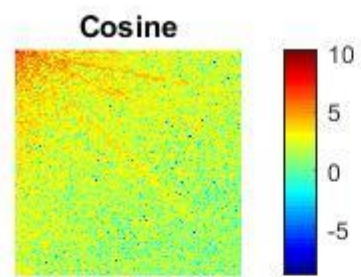
3. Image Transforms (Code in q3.m)

Original Image



Translated Image





Image



Image Translated



Hadamard Transform



Hadamard Transform (T)



4. Image Unblurring (Code in q4.m)



Original Image

Blurred Image



Undersized PSF



Deblurring with INITPSF



Original Image

Blurred Image



Undersized PSF



Deblurring with INITPSF

