

I implement two functions to finish the homework.

The first one is Laplacian(img, offset, threshold) and the second is Zero_Crossing(Laplacian_img).

The three input of Laplacian is :

img : original image, that is, lena.bmp

offset : mask that each method uses

threshold : I use the thresholds the same as those on homework website

and the output of Laplacian is an image with pixel value is P_ONE, N_ONE or ZERO.

The pixel value is determined according to the gradient magnitude and threshold.

Zero_Crossing take the output Laplaican_img from the first function and output a binary image as result.

1. Laplace Mask 1 : (threshold = 15)



2. Laplace Mask 2 : (threshold = 15)



3. Minimum Variance Laplacian : (threshold = 20)



4. Laplace of Gaussian : (threshold = 3000)



5. Difference of Gaussian : (threshold = 1)

