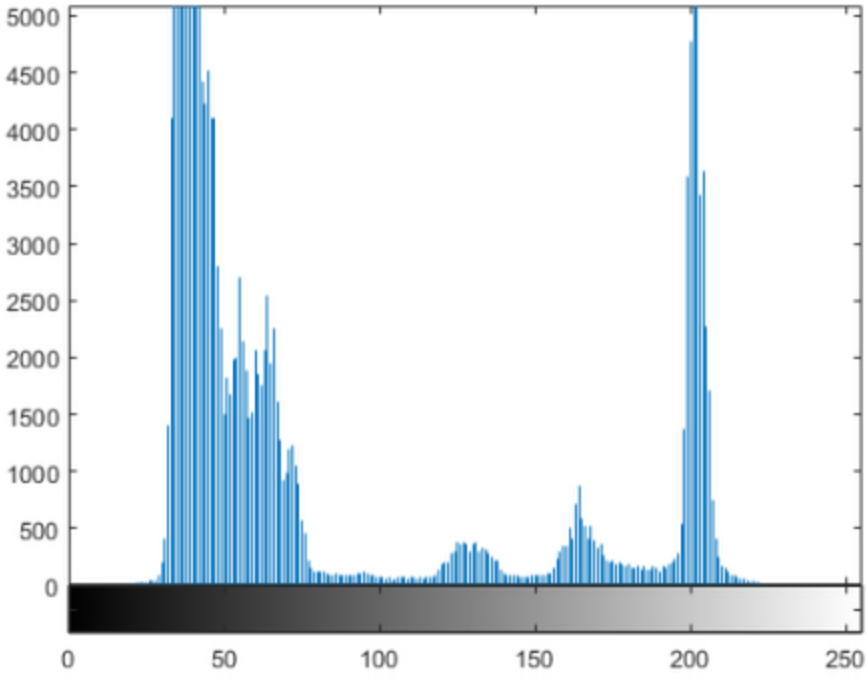
Table of Contents

David Williams i Arnau Badia

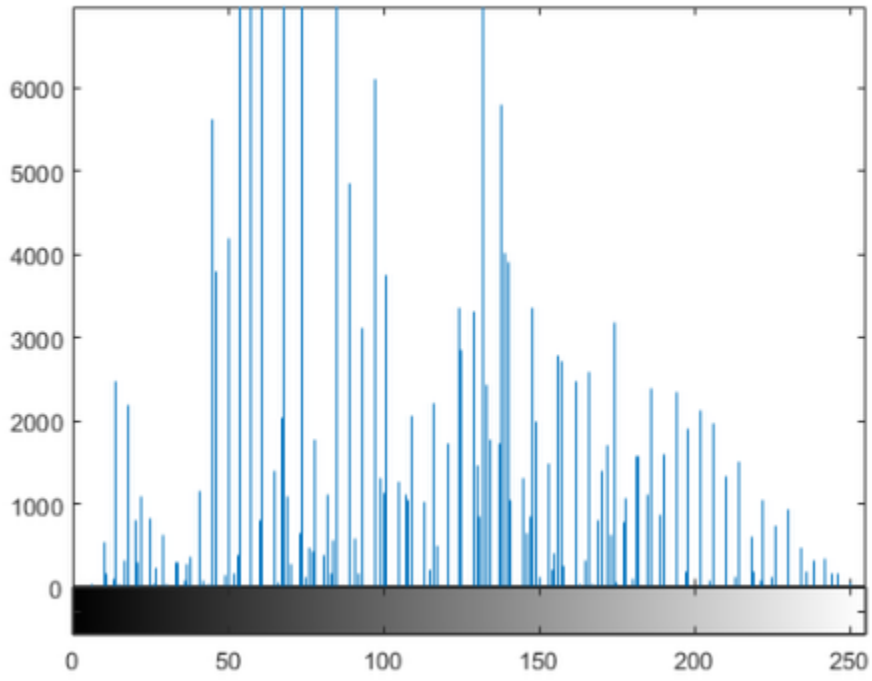
```
im=imread('I:\vc\sample images\rabbit.jpg');
imshow(im)
figure,imhist(im)
bw = im > 100;
figure, imshow(bw), title('thr=100')
bw2=im>180;
figure, imshow(bw2), title('thr=180')
```


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0
50
100
150
200
250


thr=100

Airplane binaritzar

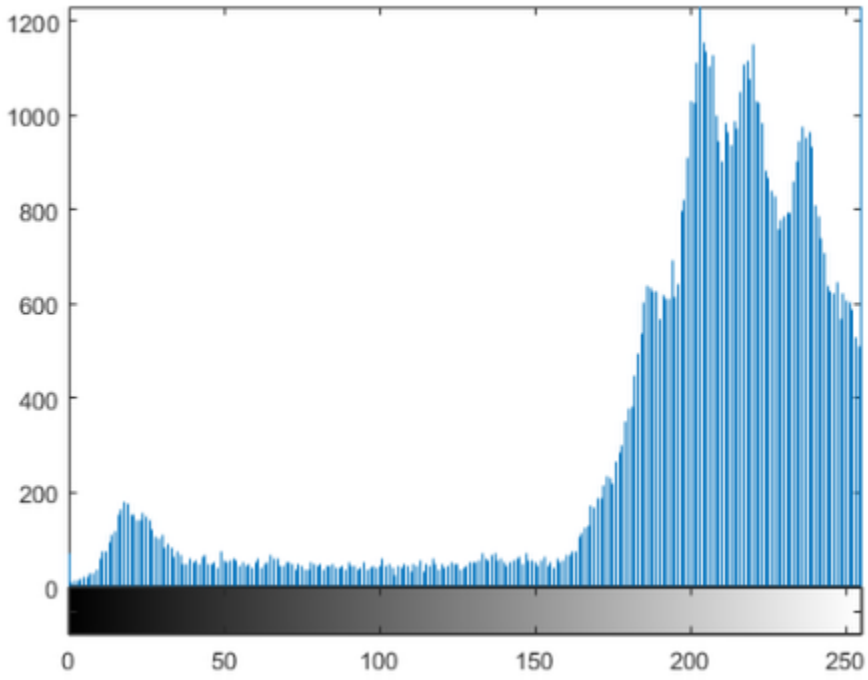
```
im=imread('I:\vc\sample images\airplane.tif');
figure, imshow(im)
figure, imhist(im)
bw = im >= 90;
figure, imshow(bw), title('thr=105')
%No funciona muy bien ya que no tenemos un backfround y un foreground
 muy
%distingibles
```


6000
5000
4000
3000
2000
1000
0
0
50
100
150
200
250

text

```
im = imread('I:\vc\sample images\textsheet.jpg');
figure, imshow(im)
figure, imhist(im)
% tienemos que hacer el promitjat de 31*31
k = 0.8;
im2 = imfilter(im,ones(31)/31/31,'conv', 'replicate');
figure, imshow(k*im2, [])
figure, imshow(im > im2-25), title('thr=im2-25')
figure, imshow(im > im2*0.85), title('thr=im2*0.8')
```


Virginia Tech
Southern Cal
Rensselaer
Colorado State
Case Western
Texas A&M
Iowa
Michigan State
Ohio State

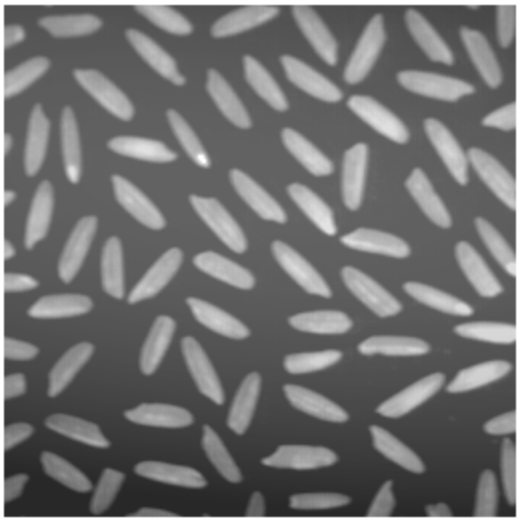

1200
1000
800
600
400
200
0
0
50
100
150
200
250

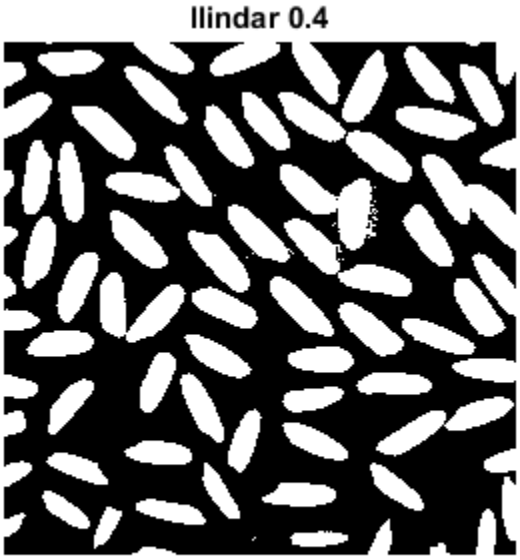
thr=im2-25

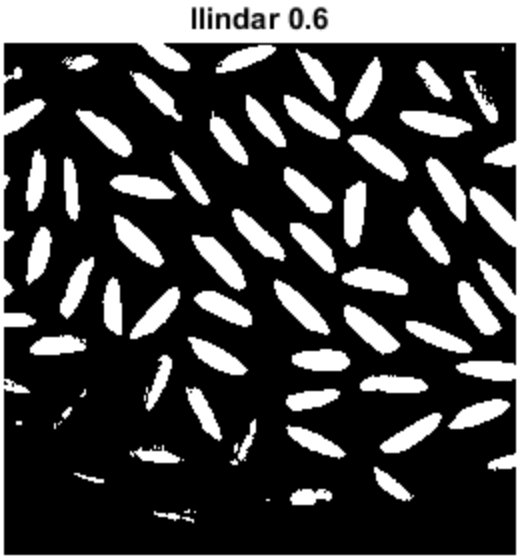
Virginia Tech
Southern Cal
Rensselaer
Colorado State
Case Western
Texas A&M
Iowa
Michigan State
Ohio State

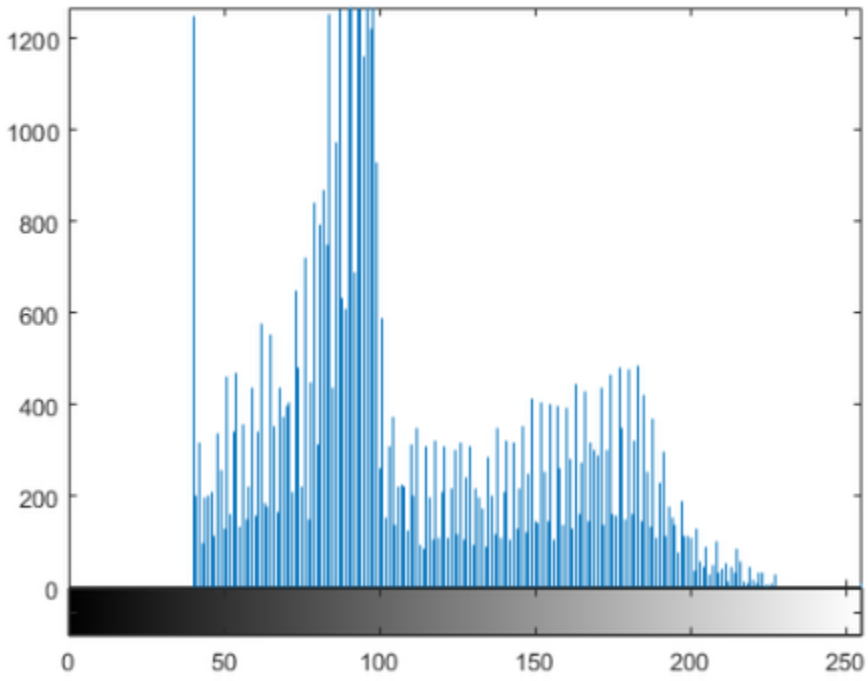
Imatge mal il·luminada

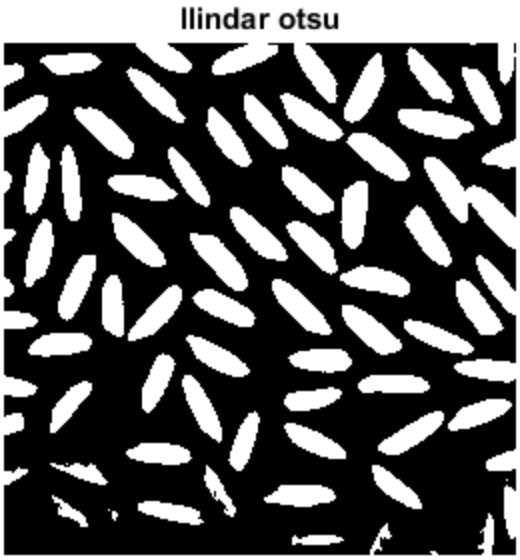
```
im = imread('I:\vc\sample images\arros.tif');
figure, imshow(im)
bw = im2bw(im, 0.4);
figure, imshow(bw), title('llindar 0.4')
bw = im2bw(im, 0.6);
figure, imshow(bw), title('llindar 0.6')
figure, imhist(im)
%otsu
th=graythresh(im)
bw = im2bw(im, th);
figure, imshow(bw), title('llindar otsu')
h=ones(51)/51/51;
mig=imfilter(double(im),h,'conv','replicate');
figure,imshow(mig,[]),title('average')
bw4= im > 1.1*mig;
figure,imshow(bw4),title('local threshold')


th =

    0.4902
```

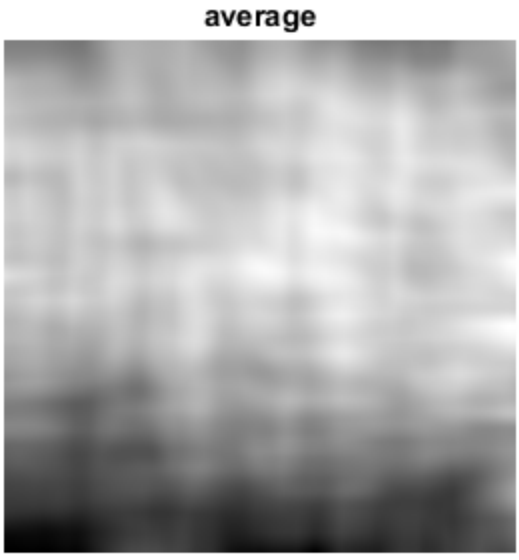


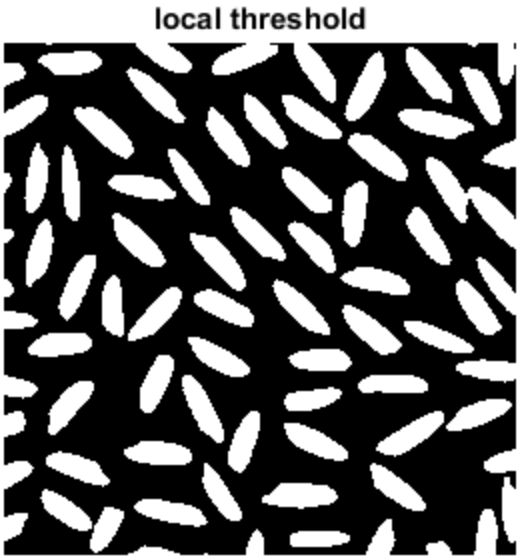

Ilindar 0.4


llindar 0.6


1200
1000
800
600
400
200
0
0
50
100
150
200
250


Ilindar otsu


average

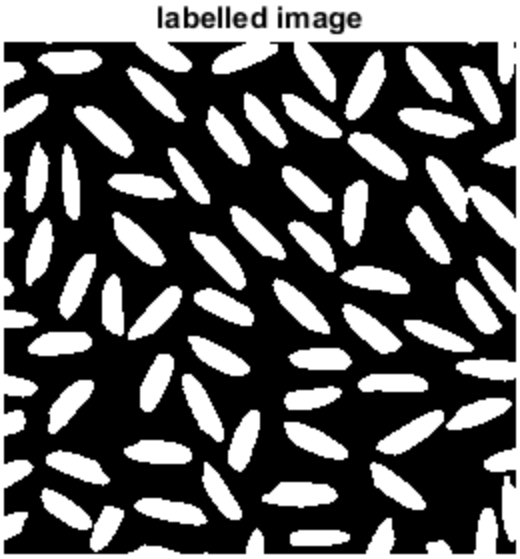


labelling

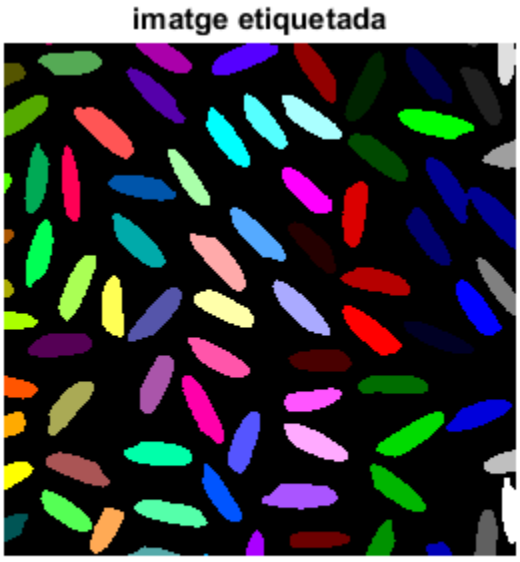
```
eti = bwlabel(bw4,4);
figure,imshow(eti),title('labelled image');
impixelinfo;
max(eti(:));
rgb=label2rgb(eti,@colorcube,'k');
figure,imshow(rgb),title('imatge etiquetada')
aux = find(eti==40);
figure, imshow(aux)
bw5 = (eti == 40);
figure, imshow(bw5)
Dades = regionprops(eti, 'all');
Arees = [Dades.Area];
%Regió amb una area massa gran per un gra d'arrós
Gros = find(Arees==676)
aux = (eti==Gros);
figure, imshow(aux)
mean(Arees)
figure, hist(Arees,100)
```

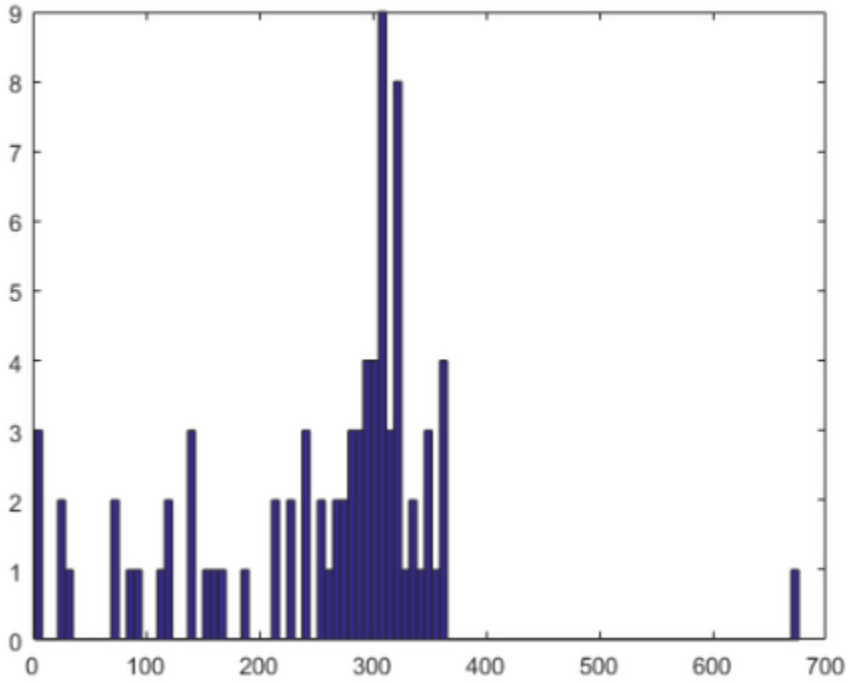
```
Warning: Region number 73 has the same color as the ZEROCOLOR.

Gros =

    69


ans =
```

254.3333



Pixel info: (X, Y) Pixel Value



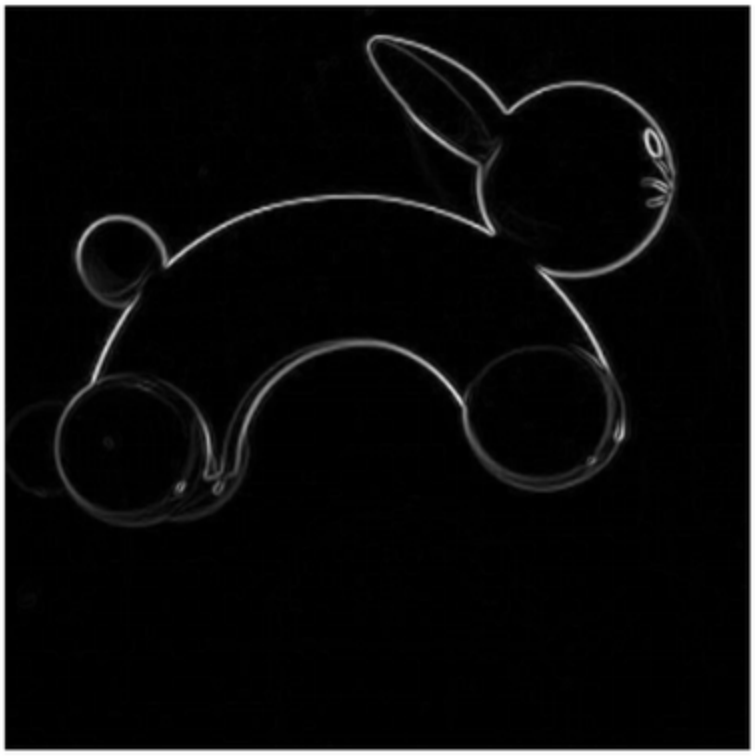


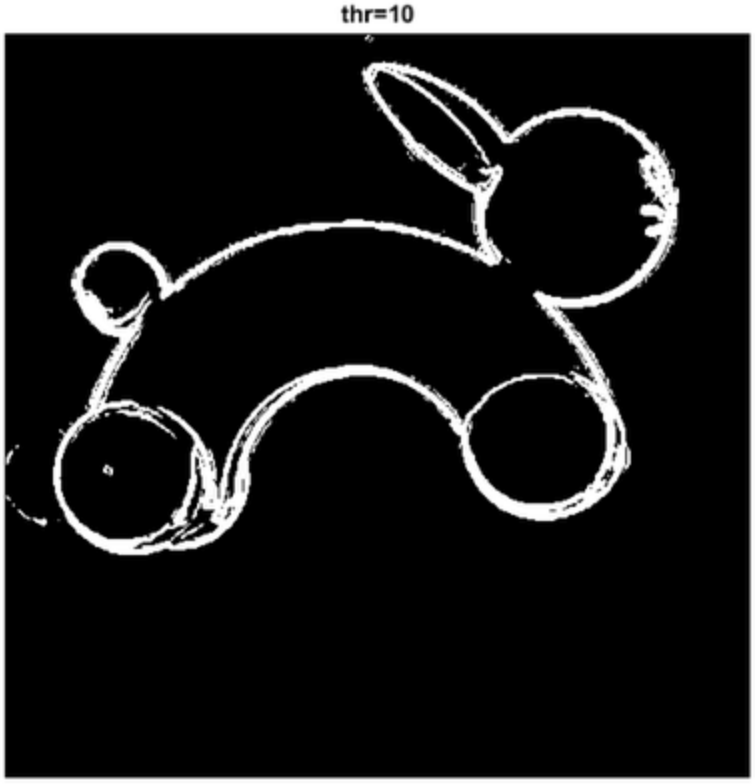
rabbit contorn detection

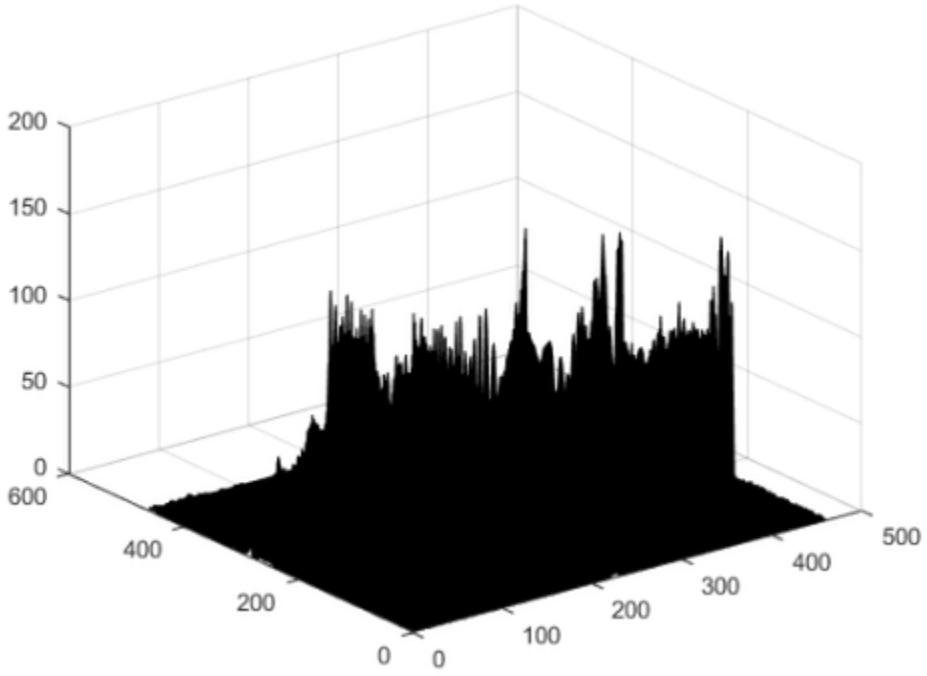
```
im = imread('I:\vc\sample images\rabbit.jpg');
sobv = fspecial('sobel')
sobv = sobv/4;
```

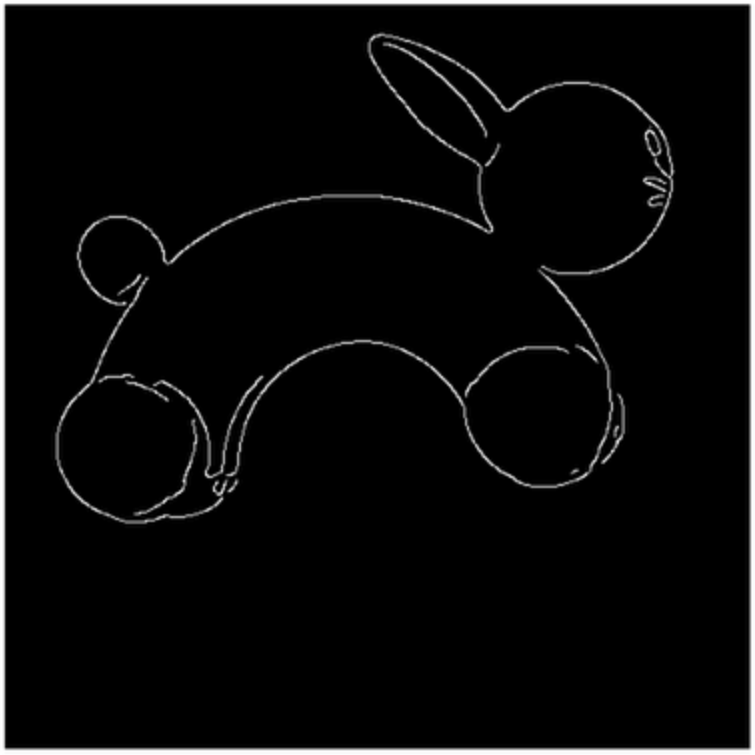
```
Gy=imfilter(double(im), sobv, 'conv', 'replicate');
Gx=imfilter(double(im), sobv', 'conv', 'replicate');
mod = sqrt(Gx.*Gx + Gy.*Gy);
figure, imshow(mod, [])
bw = mod > 10;
figure, imshow(bw), title('thr=10')
figure, surf(mod)
res = edge(im, 'Canny',[0.1 0.2], 2);
figure, imshow(res)
```

```
sobv =

     1     2     1
     0     0     0
    -1    -2    -1
```




thr=10


200
150
100
50
0
600
400
200
0
0
100
200
300
400
500



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