

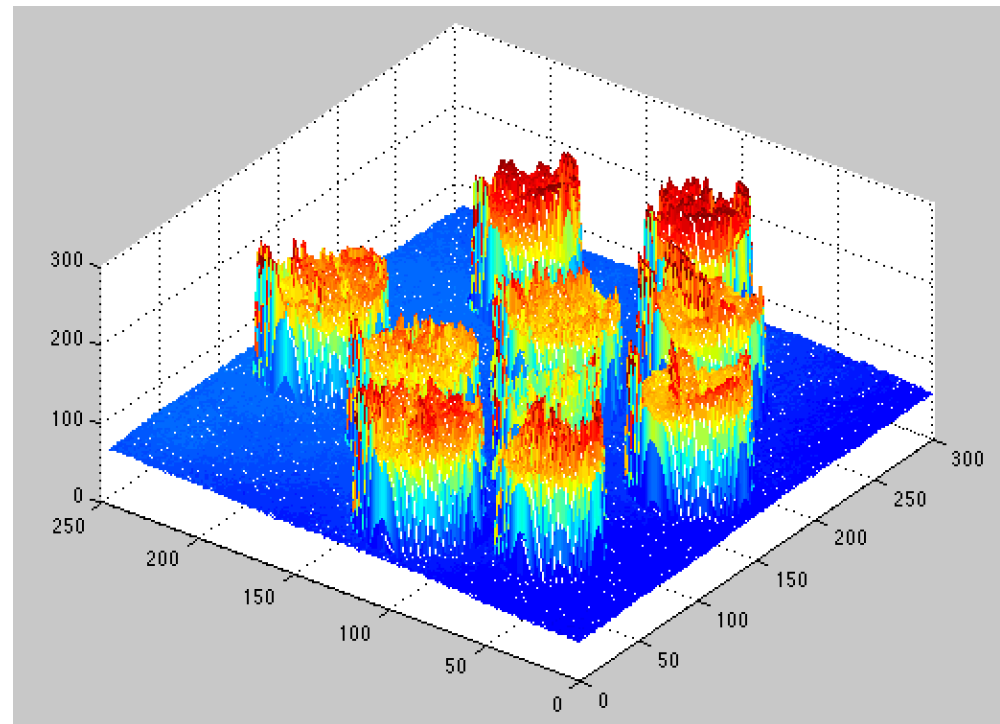
Algunos comentarios sobre el cálculo de gradientes y el tipo de dato

Imagen “coins.png” y su representación 3D



← `I=imread('coins.png');`
`figure, imshow(I)`

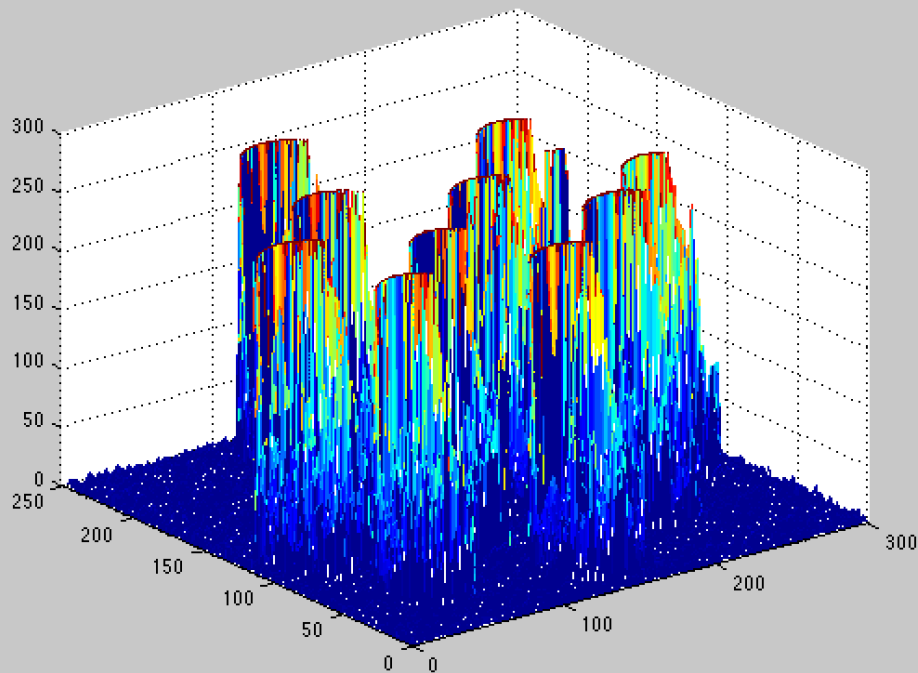
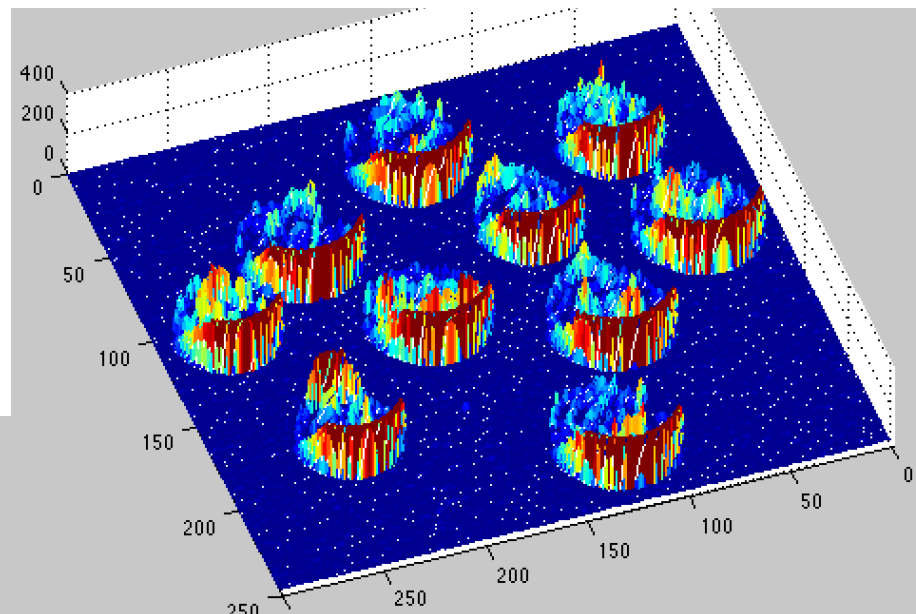
`figure, mesh(double(I))` →



Filtrado Prewitt de la imagen tipo uint8

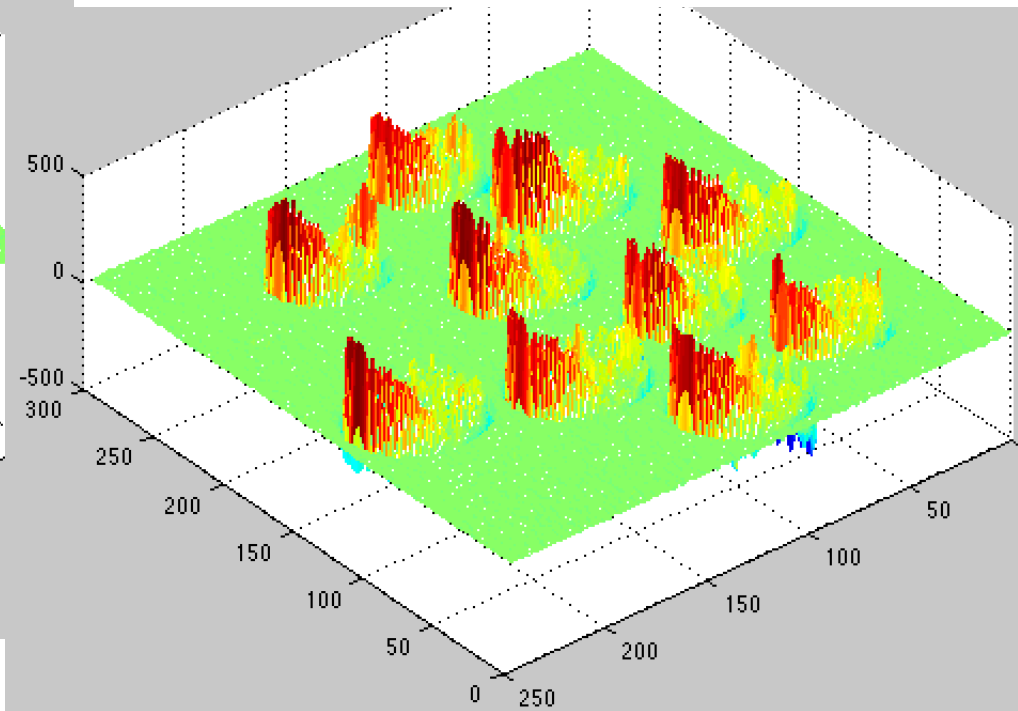
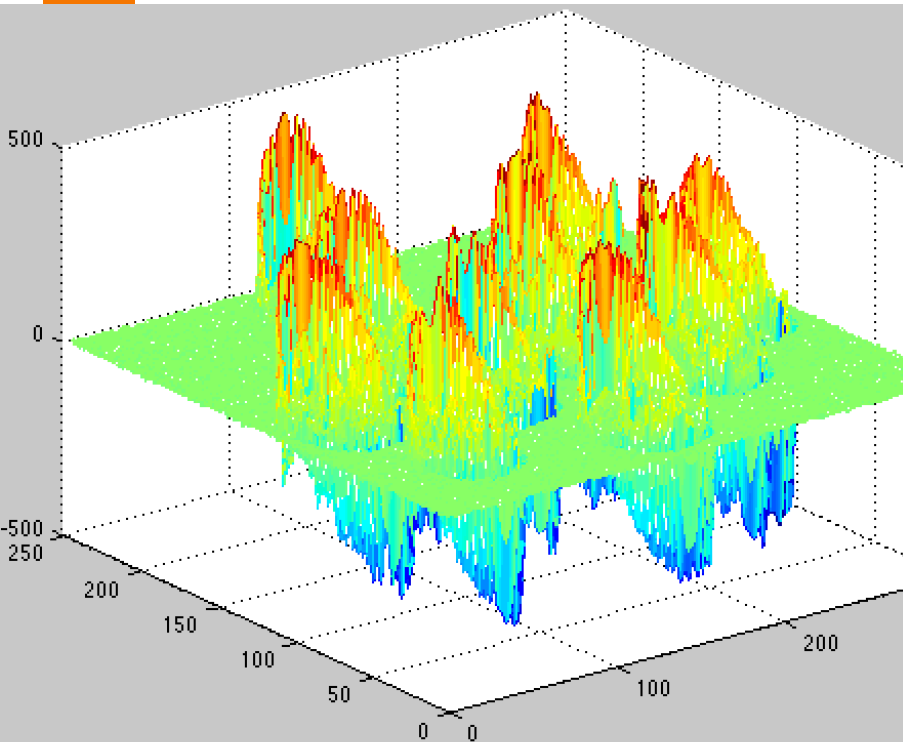
```
H_prew = fspecial('prewitt')
I_Hprew =
imfilter(I,H_prew,'symmetric');
```

```
figure, mesh(I_Hprew)
figure, imshow(I_Hprew)
```



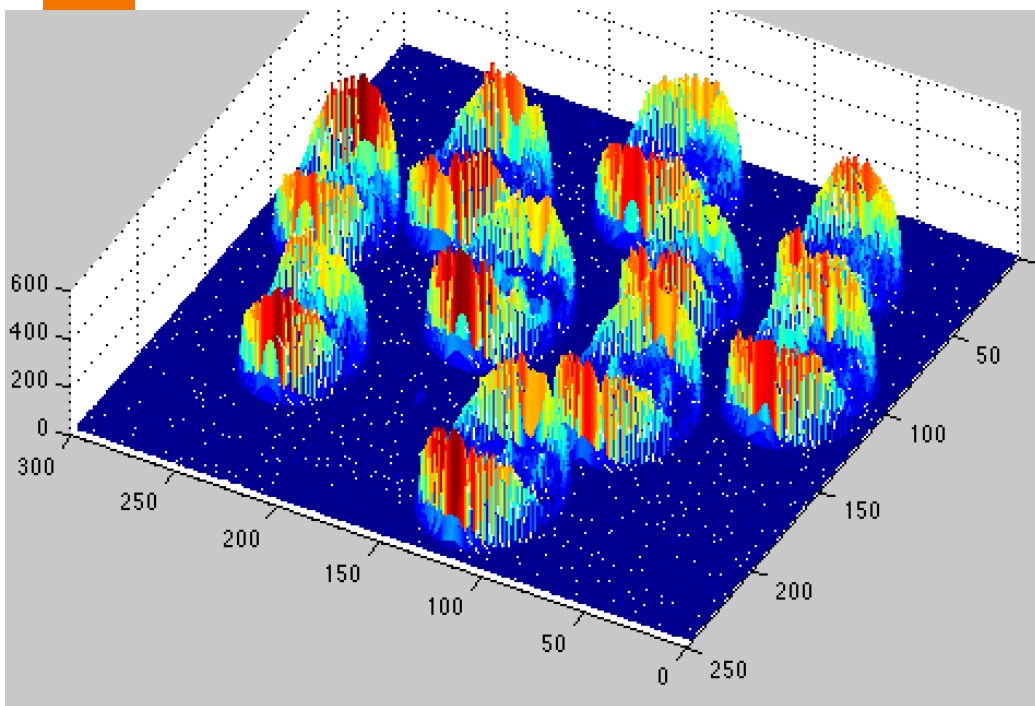
Filtrado Prewitt de la imagen tipo double (I)

```
H_prew = fspecial('prewitt');  
I_Hprew = imfilter(double(I),H_prew,'symmetric');  
figure, mesh(I_Hprew)
```



Módulo del gradiente con imagen tipo double

```
H_prew = fspecial('prewitt');
I_Hprew = imfilter(double(I),H_prew,'symmetric');
figure, mesh(abs(I_Hprew))
```



```
figure, imshow(uint8(abs(I_Hprew)))
```



Diferencia filtrado completo modificando tipo de dato



Gradiente total con Prewitt-no double



```
H_prew = fspecial('prewitt')
I_Hprew = imfilter(I,H_prew,'symmetric');
H_prew2 = H_prew';
I_Hprew2 = imfilter(I,H_prew2, 'symmetric');
I_grad_Prewitt = uint8(0.5*(double(I_Hprew)
+double(I_Hprew2)));
figure, imshow(I_grad_Prewitt)
```

```
I_Hprew =
imfilter(double(I),H_prew,'symmetric');

I_Hprew2 =
imfilter(double(I),H_prew2, 'symmetric');

I_grad_Prewitt = uint8(0.5*(abs(I_Hprew)
+abs(I_Hprew2)));
figure, imshow(I_grad_Prewitt)
```

Gradiente total con Prewitt-double

