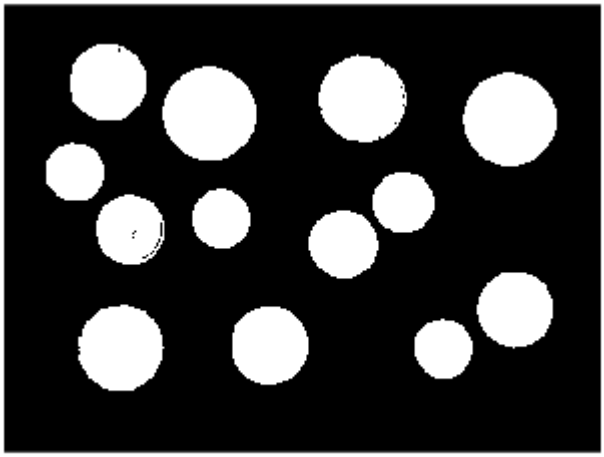
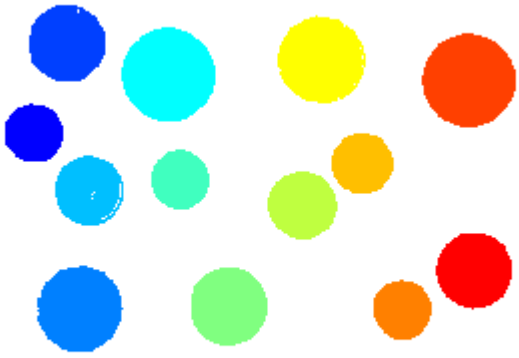
Sesión 4 - 10/03

Labelling

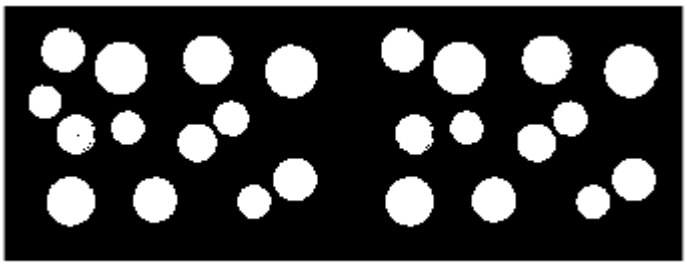
```
I = imread("money.tif");
BW = I > 100;
imshow(BW);
```



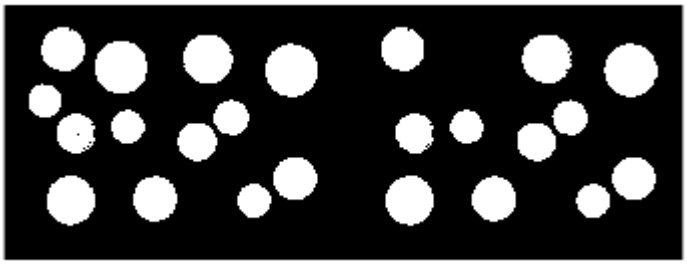
```
L = bwlabel(BW);
RGB = label2rgb(L); % posar colors random a les etiquetes diferents
imshow(RGB);
```



```
C = bwconncomp(BW); % segmentar (labelling)
CBW = BW;
CBW(C.PixelIdxList{1}) = 0;
montage({BW,CBW});
```



```
%eliminem la moneda més gran (més area --> més px)
npx = cellfun(@numel,C.PixelIdxList);
[valormax, pos] = max(npx);
CBW(C.PixelIdxList{pos}) = 0;
montage({BW,CBW});
```



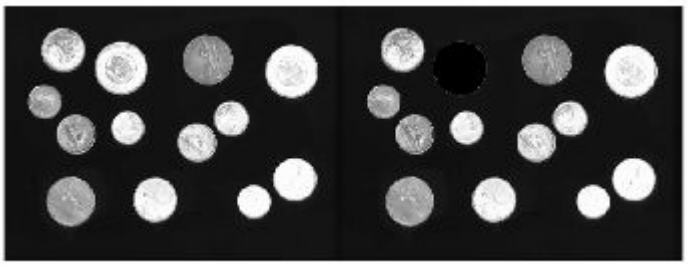
```
max = 1;
for i=1:13
    if sum(C.PixelIdxList{i}) > sum(C.PixelIdxList{max})
        max = i;
    end
end

% surten diferents. monedes igual de tamany?
pos
```

```
pos = 5
```

```
max
```

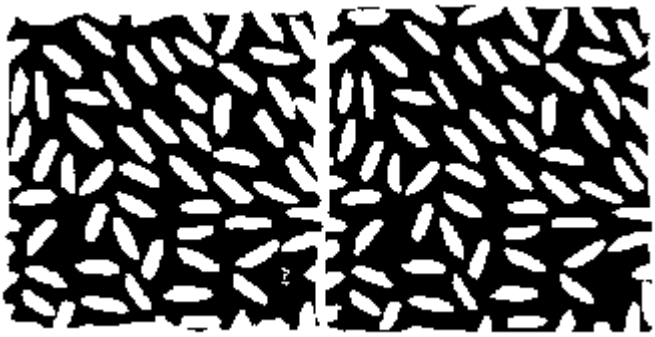
```
max = 12
```

```
% efectes visuals
IC = I;
% IC(C.PixelIdxList{pos}) = I (C.PixelIdxList{pos})-64;
IC(C.PixelIdxList{pos}) = 0;
montage({I,IC});
```



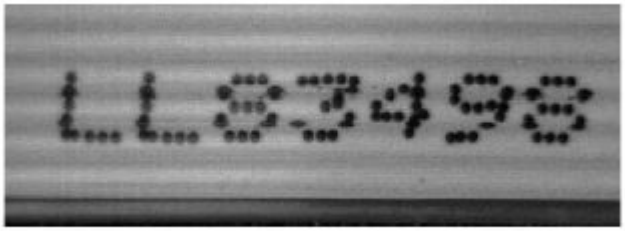
Binaritzat 2a Part

```
I = imread("arros.tif");

% vull la mitjana dels veins de cada px
window = [30,30]; % mirant a ull. un gra es molt petit per tant volvem abarcarho tot per distir
M = colfilt(I,window,'sliding',@mean);
% ens carguem els px que estiguin per sobre de la mitja
BW1 = I > M; % sense llindar -> veure imperfecció
k = 16;
BW2 = I > M + k; % li posem un llindar de nivell de grisos per evitar posibles problemes
% (objectes de mitja clara) BW = I > M + K
% (objectes de mitja fosc) BW = I < M - K
montage({BW1,BW2});
```



exercici binaritzar

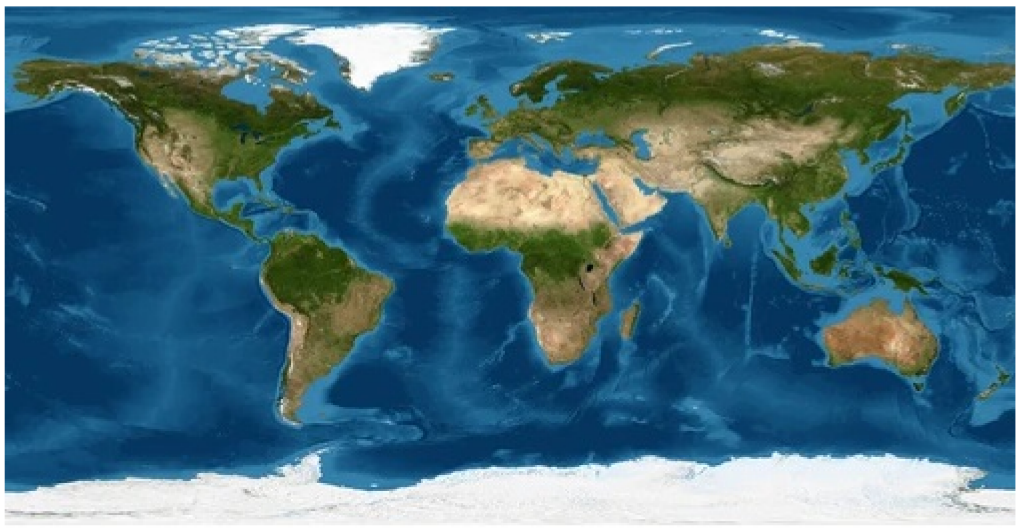
```
I = imread("FlatCable1.tif");
imshow(I);
```



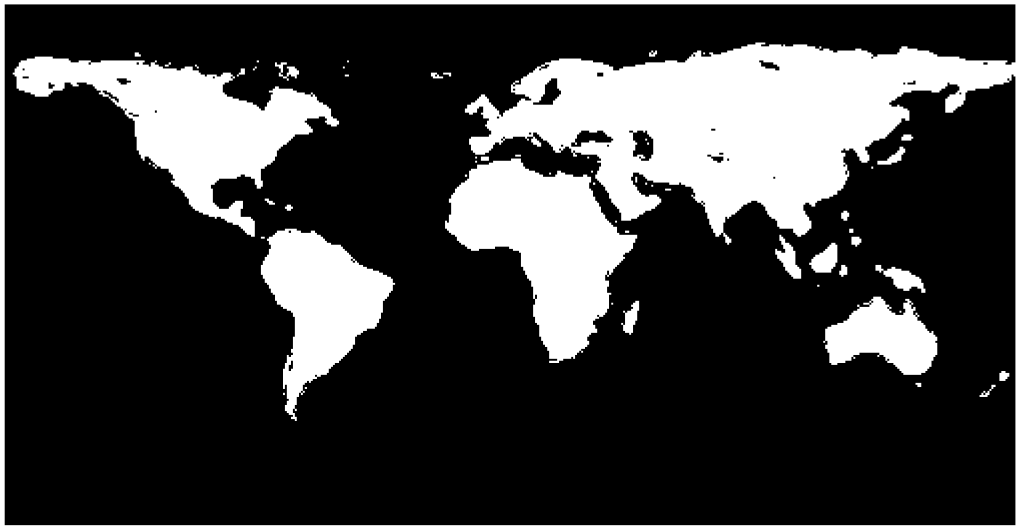
```
% mida del que estem buscant
window = [1,79]; % coger en horizontal lo que mide un digito
M = colfilt(I,window,'sliding',@mean);
k = 25;
BW = I < M - k;
imshow(BW);
```

exercici mon

```
I = imread("mon1.jpg");
imshow(I);
```



```
IH = rgb2hsv(I);
hue = IH(:,:,1);
BW = hue < 0.5; % hue blau
BWtest = IH(:,:,2) > 0.2; % saturació del blanc es lo més proper a 0
new = BW & BWtest;
imshow(BW & BWtest);
```



```
R = I(:,:,1);
G = I(:,:,2);
B = I(:,:,3);

R(new==0) = 0;
G(new==0) = 0;
B(new==0) = 0;

I(:,:,1) = R;
I(:,:,2) = G;
I(:,:,3) = B;
imshow(I);
```