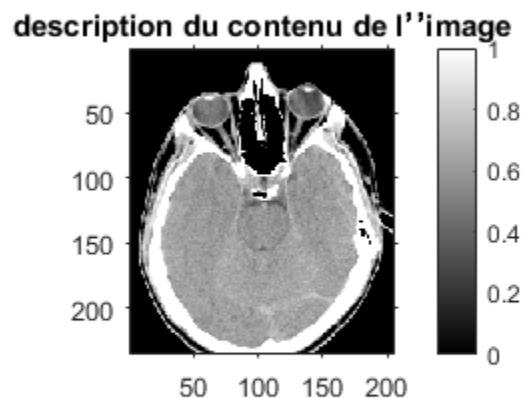

TD2 ZHOU-Nan

Table of Contents

Question 0	1
Question 1	2
Question 2	2
Question 3	3
Question 4	4
Question 5	5
Question 6	6
Question 7	7
Question 8	8
Question 9	9
Question 10	10
Question 11	10

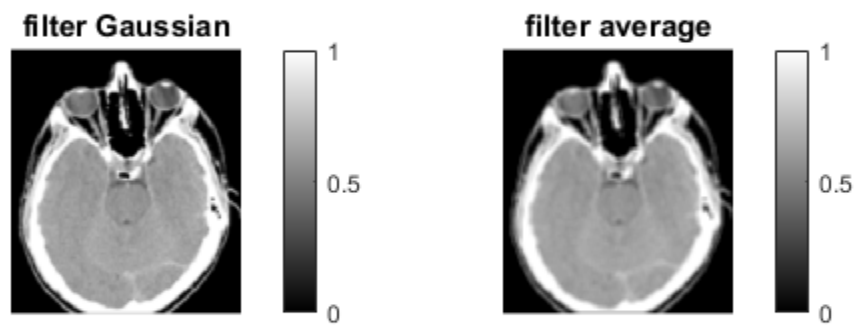
Question 0

```
I=imread('Tomographie_RayonsX.png') ;% ..  
I=double(I)/255; % ..  
figure; % ..  
imshow(I,[]); % ..  
colorbar; % ..  
axis on ; % ..  
title('description du contenu de l''image'); % ..
```



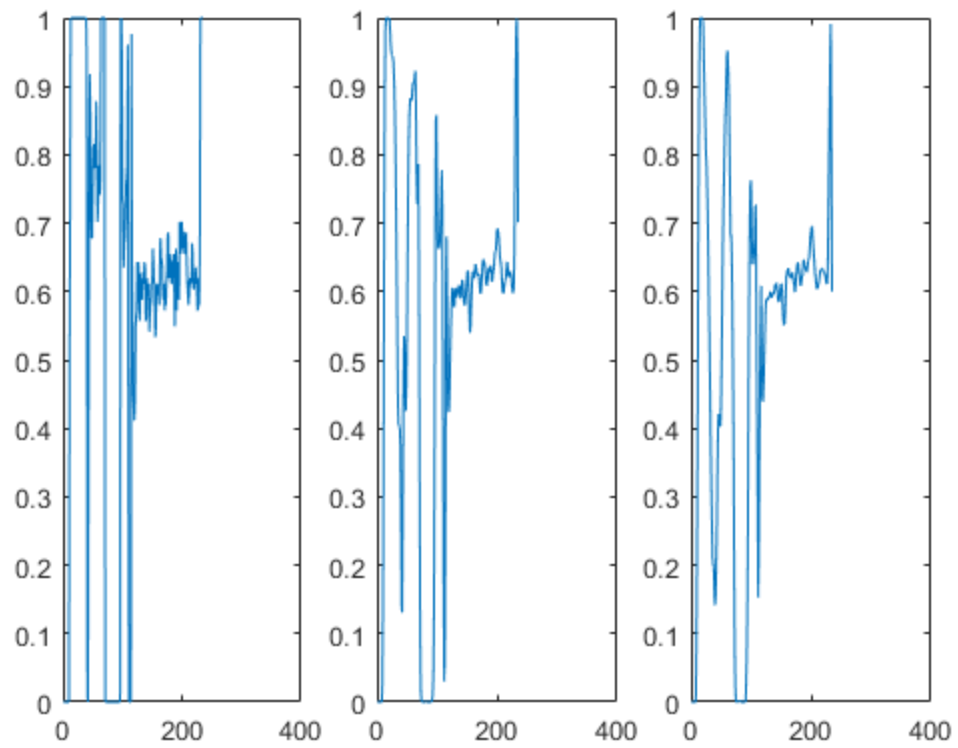
Question 1

```
Mm=ones(5,5)/25;  
Mg=fspecial('gaussian',5,1);  
Ifg=imfilter(I,Mg);  
Ifm=imfilter(I,Mm);  
figure  
subplot(1,2,1);imshow(Ifg);colorbar;title('filter Gaussian');  
subplot(1,2,2);imshow(Ifm);colorbar;title('filter average');
```



Question 2

```
subplot(1,3,1);plot(I(:,100));  
subplot(1,3,2);plot(Ifg(:,100));  
subplot(1,3,3);plot(Ifm(:,100));  
hold on;
```



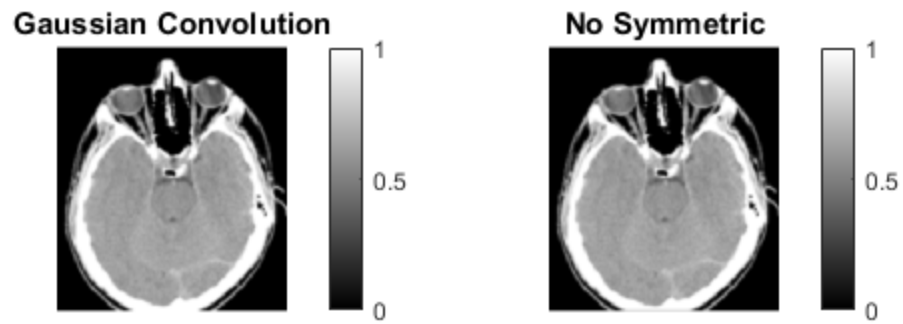
Question 3

```
Ibruit_gauss=imnoise(I, 'gaussian',0.1,0.02);  
figure  
imshow(Ibruit_gauss);
```



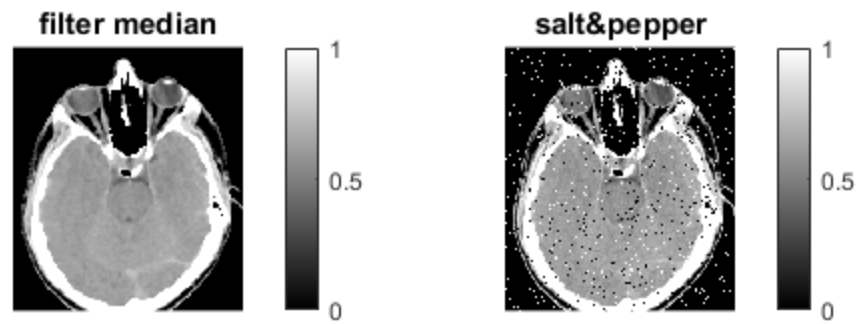
Question 4

```
IfgConv=imfilter(I,Mg,'conv','symmetric');  
IfgConv1=imfilter(I,Mg,'conv');  
figure  
subplot(1,2,1);imshow(IfgConv);colorbar;title('Gaussian Convolution');  
subplot(1,2,2);imshow(IfgConv1);colorbar;title('No Symmetric');
```



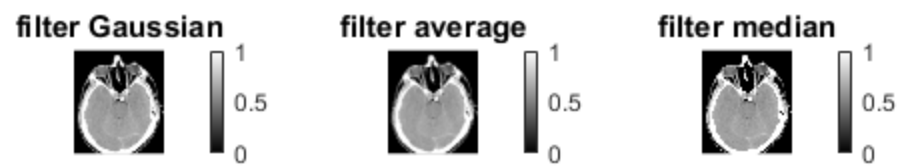
Question 5

```
Ifme=medfilt2(I,[3,3]);  
Ibruit_ps=imnoise(I,'salt & pepper') ;  
figure  
subplot(1,2,1);imshow(Ifme);colorbar;title('filter median');  
subplot(1,2,2);imshow(Ibruit_ps);colorbar;title('salt&pepper');
```



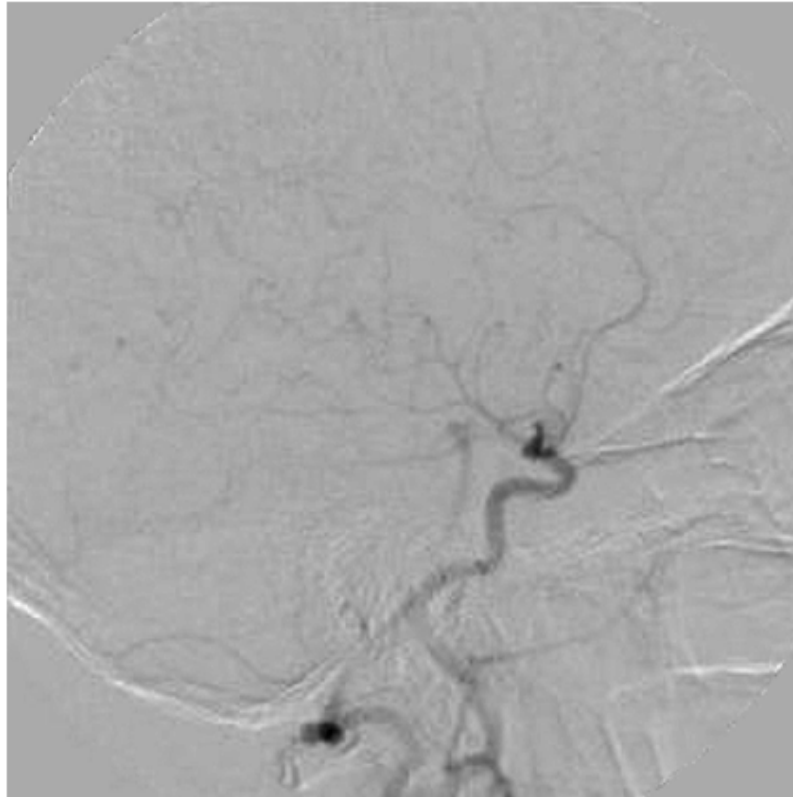
Question 6

```
figure
subplot(1,3,1);imshow(Ifg);colorbar;title('filter Gaussian');
subplot(1,3,2);imshow(Ifm);colorbar;title('filter average');
subplot(1,3,3);imshow(Ifme);colorbar;title('filter median');
```



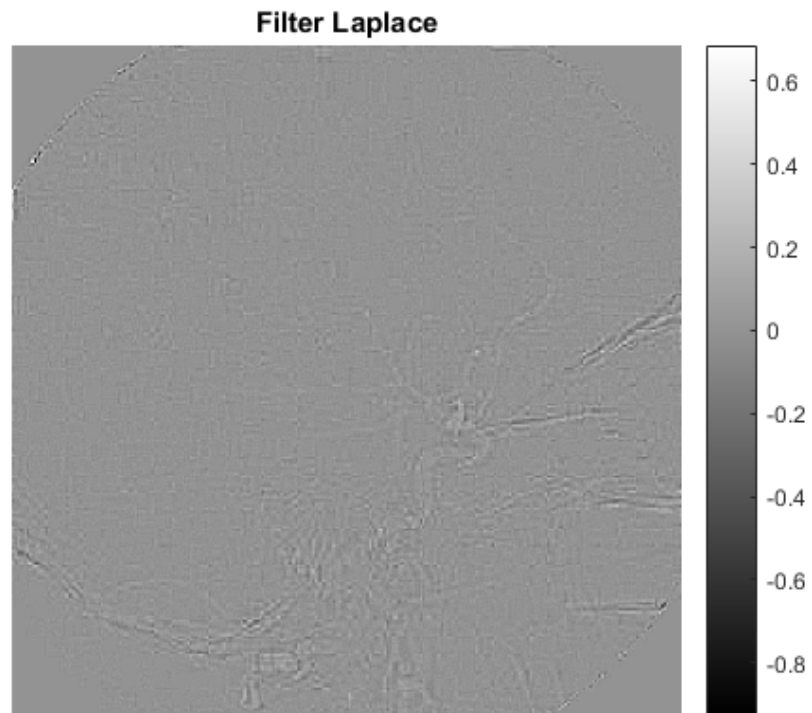
Question 7

```
fond=double(imread('angiographie_fond.tif'))/255;  
image=double(imread('angiographie_image.tif'))/255;  
Img=image-fond;  
figure  
imshow(Img,[]);
```



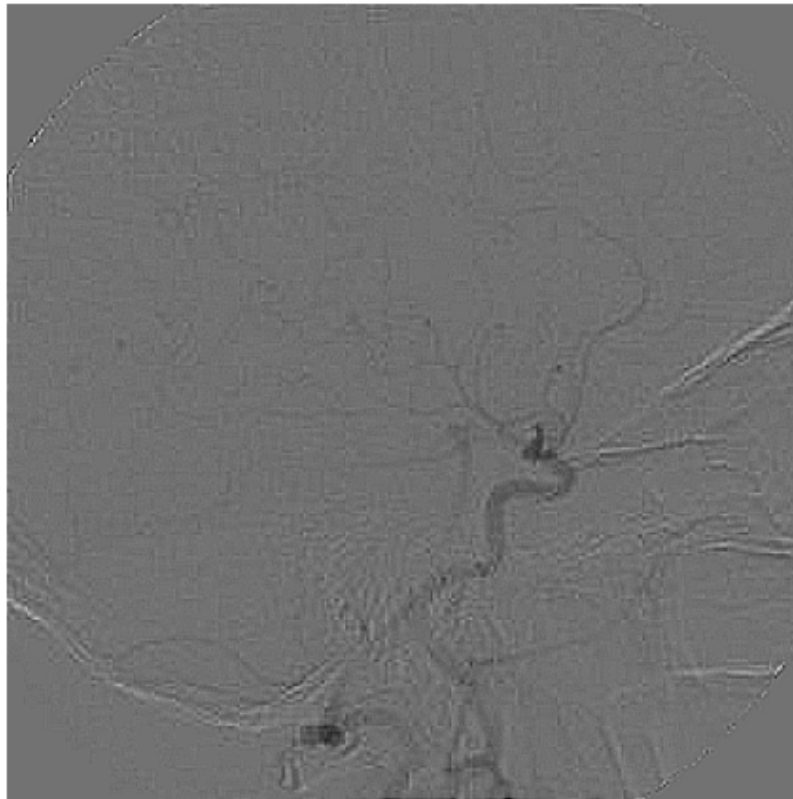
Question 8

```
Mlap=[1,1,1;1,-8,1;1,1,1];  
If1=imfilter(Img,Mlap);  
figure  
imshow(If1,[]);colorbar;title('Filter Laplace');
```

Question 9

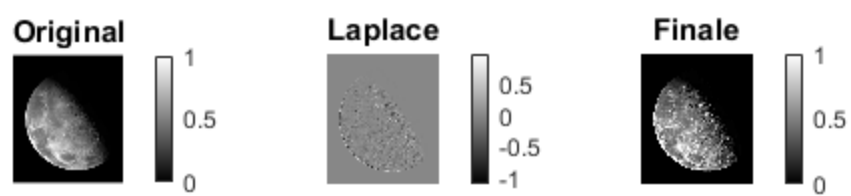
```
Image_finale=Img-Ifl;  
figure  
imshow(Image_finale,[]);
```



Question 10

Question 11

```
moon=double(imread('Blurry_moon.tif'))/255;
If1_moon=imfilter(moon,Mlap);
moon_finale=moon-If1_moon;
figure
subplot(1,3,1);imshow(moon);colorbar;title('Original');
subplot(1,3,2);imshow(If1_moon,[]);colorbar;title('Laplace');
subplot(1,3,3);imshow(moon_finale);colorbar;title('Finale');
```



Published with MATLAB® R2016b