

### TP----3 : Analyse et Traitement d'images de base

**Remarque :** créer une image « image.bmp » dans la racine de votre PC « C : »

```
>>X=imread('C:\image.bmp')
>>size(X)
>>imshow(X)
>>imshow(X(:,:,1))
>>imshow(X(:,:,2))
>>imshow(X(:,:,3))
>>whos
>>imfinfo('C:\image.bmp')
>>Y=(X(:,:,1)+X(:,:,2)+X(:,:,3))/3
>>imshow(X)
>>figure
>>imshow(Y)
>>size(Y)
>>Y=(X(:,:,1)+0.2*X(:,:,2)+X(:,:,3))/3
>>imshow(X)
>>figure
>>imshow(Y)
>>Y=(0.2*X(:,:,1)+X(:,:,2)+X(:,:,3))
>>imshow(Y)
>>clear Y
>>Y=rgb2gray(X)
>>imshow(Y)
>>clear
>>X = imread('rice.png')
>>Y = imread('cameraman.tif')
>>size(X)
>>size(Y)
>>imshow(X)
>>imshow(Y)
>>Z=(X+Y)/2
>>imshow(Z)
>>Z=(0.2*X+0.8*Y)
>>imshow(Z)
>>clear Z
>>Z=X*Y
>>Z=im2bw(X, 0.6)
>>imshow(Z)
>>Z=im2bw(X, 0.8)
>>imshow(Z)
>>Z=im2bw(X, 0.2)
>>imshow(Z)>>Z = imresize(Y,1.25);
>>imshow(Z)
>>figure
>>imshow(Y)
>>clear Z
>>Z=imresize(Y,[150 50]);
>>imshow(Y)

>>figure;
>>imshow(Z);
>>clear Z;
>> Z1 = imresize(Y,[300 300],'nearest');
>> Z2 = imresize(Y,[300 300],'bilinear');
>> Z3 = imresize(Y,[300 300],'bicubic');
>>imshow(Z1);figure;imshow(Z2);figure;imshow(Z3);
>> Z = imrotate(Y,35,'bilinear');
>> figure;imshow(Z);
>> H = imhist(Y);
>> imhist(Y);
>> imtool;
>> imtool(Y);
>> Z = histeq(Y);
>> figure;imshow(Z);
>> figure;imshow(Y);
>> imhist(Z);
>> figure;
>> imhist(Y);
>> clear;
>> X = imread('pout.tif');
>> Y = imadjust(X);
>> imshow(X), figure, imshow(Y);
>> clear;
>> X = imread('football.jpg');
>> Y = imadjust(X,[.2 .3 0; .6 .7 1],[,]);
>> imshow(X), figure, imshow(Y)
```