function Y = convolucion(Img,Filtro)

I=imread(Img);

R=I(:,:,1);

ImgO=R;

figure('Name','Original','NumberTitle','off')

imshow(R);

[M,N]=size(ImgO);

ImgC=ImgO;

[FM,FN]= size(Filtro);

inc = (FM-1)/2;

%Construir imagen copia con borde

for i=1:(M+(inc\*2))

for j=1:(N+(inc\*2))

if i>(inc) && i<=(M+inc) && j>(inc) && j<=(N+inc)

ImgC(i,j)=ImgO((i-(inc)),(j-(inc)));

else

ImgC(i,j) = 0;

end

end

end

%figure('Name','Copia','NumberTitle','off')

%imshow(ImgC);

%Imagen resultante

ImgR=ImgO;

for x=1+inc:M+inc

for y = 1+inc:N+inc

suma=0;

for i=-inc:+inc

for j=-inc:+inc

suma=suma+(ImgC(x+i,y+j)\*Filtro((FM-inc)+i,(FN-inc)+j));

end

end

ImgR(x-inc,y-inc)=suma;

end

end

% figure('Name','Final','NumberTitle','off')

% imshow(ImgR);

Y=ImgR;

end