

```

clear all; close all; more off;
clf
clc
myTestfun=@(x,y) (1+25.*x.^2.*y.^2).^(-1);

n=100;           % PADUA POINTS DEGREE, for Lagrange interpolation.
xyrange=[-1,1,-1,1]; % DEFINITION OF THE RECTANGLE.

hfig = figure;
axis tight manual % this ensures that getframe() returns a consistent size
filename = 'testAnimated.gif';

theM=[3:2:100];

for j=1:length(theM)
    clf
    M=theM(j);
    X = pdpts(M,xyrange);
    LnfX = pdint(n,xyrange,myTestfun,X);
    fX=feval(myTestfun,X(:,1),X(:,2));

    tri = delaunay(X(:,1),X(:,2));
    light
    subplot(1,2,1)
    hold on
    scatter(X(:,1),X(:,2),'.','r')
    h=trisurf(tri, X(:,1),X(:,2),LnfX,
    'FaceLighting','gouraud','FaceColor','interp','AmbientStrength',0.5,
    'DiffuseStrength',1);
    light('Position',[-1 -1 1],'Style','local')
    set(h,'linestyle','none')
    view(30,30);
    subplot(1,2,2)
    scatter(X(:,1),X(:,2),'.')

drawnow
    %Capture the plot as an image
    frame = getframe(hfig);
    im = frame2im(frame);
    [imind,cm] = rgb2ind(im,256);
    % Write to the GIF File
    if j == 1
        imwrite(imind,cm,filename,'gif', 'Loopcount',inf);
    else
        imwrite(imind,cm,filename,'gif','WriteMode','append');
    end
end

```