

```
close all
clear all

rand('seed',0);

%%% define matrix
P='problem4'; n=100;
[A,b,Lambda]=feval(P,n);
x=rand(n,1)-0.5+sqrt(-1)*rand(n,1)-0.5; b=x/norm(x,2);

if 0
    namematrix='meier01';
    namematrix='hybrid92';
    namematrix='Grondle4';
    [A,b,hbtype]=matrixhbo(NameMatrix); b=b(:,1); n=size(b,1)
    fprintf(1,'%s: %d by %d matrix of type %s\n',A,n,n,hbtype)
end

tol=1e-8; kmax=200;
[x,hist,t,Ritz]=arnoldi(A,b,tol,kmax,'m');

pause

%%% define matrix
P='problem5'; n=100;
[A,b,Lambda]=feval(P,n);
x=rand(n,1)-0.5; b=x/norm(x,2);

figure
[theta,x,hist,t,Ritz]=lanczos(A,b,tol,kmax,'m');
```