```
>> A=randn(5,5);
>> H=hessen(A,true);

A =

   -0.4723   -0.0650    0.9248    0.0227    0.5542
    0.2760   -0.6201    1.4470    0.0953    0.6424
    0.9842    0.2241    0.5958    1.6145    0.1826
    0.9931   -0.4661    2.0533    0.5013   -2.0275
    0.6682   -0.3321   -1.5293   -0.3238    1.0231


S =

   -0.4723   -0.8165    0.5250   -0.3807    0.2828
   -1.5740    1.2228   -0.8367   -0.7653    0.9139
   -0.0000   -0.2568   -1.3966    0.3722   -0.2008
   -0.0000    0.6047    0.8707    0.0831   -1.8523
         0    1.6339   -1.6623    0.0634    1.5908


S =

   -0.4723   -0.8165    0.0551   -0.2399    0.6633
   -1.5740    1.2228    0.7072   -1.2280   -0.3361
   -0.0000    1.7610    0.9694   -0.5690   -0.7575
   -0.0000   -0.0000   -2.0640    1.0322    0.1167
         0   -0.0000    1.0728   -0.5684   -1.7243


S =

   -0.4723   -0.8165    0.0551    0.5188    0.4779
   -1.5740    1.2228    0.7072    0.9345   -0.8646
   -0.0000    1.7610    0.9694    0.1555   -0.9346
   -0.0000   -0.0000    2.3262    0.6307   -1.3407
         0   -0.0000   -0.0000   -0.6557   -1.3228

>> l=sort(eig(A));
>> lh=sort(eig(H));
>> norm(l-lh)

ans =

   7.7067e-15

>> S=A+A';
>> T=hessen(S,false);
>> isbanded(T,1,1)

ans =

  logical

   1

>> norm(T-T')

ans =

   8.8818e-16

>> ls=sort(eig(S));
```

```
>> lt=sort(eig(T));
>> norm(ls-lt)

ans =

   5.6698e-15

>>
```