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Lab 10

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1

Warning: Imaginary parts of complex X and/or Y arguments ignored

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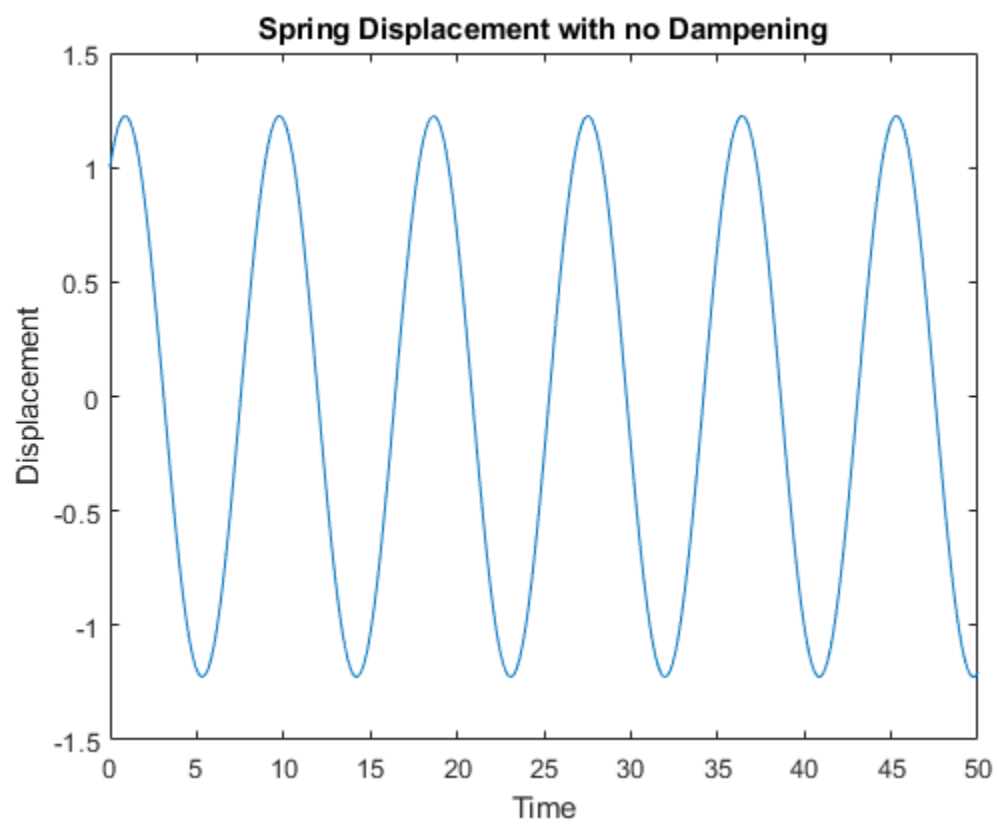
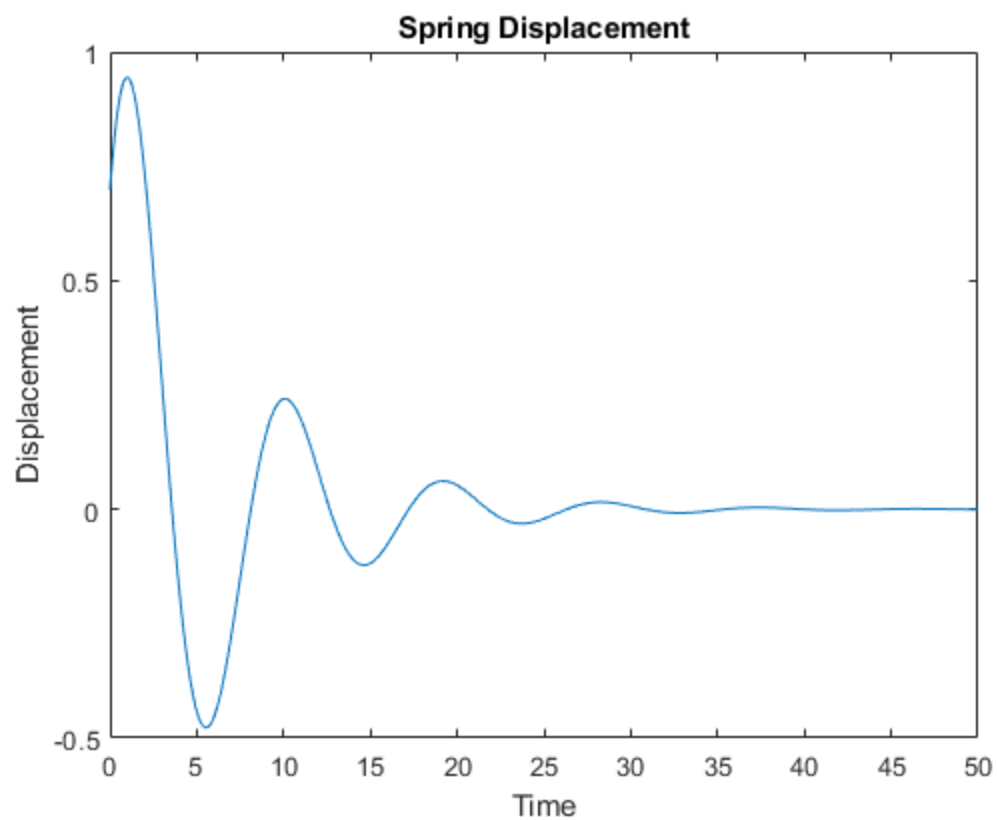
*If c=0 then the sin wave continues indefinitely. The eigenvalues when
c = .3 have real components and when c=0 they do not.*

c=.3 eigenvalues

*-0.1500 + 0.6910i 0.0000 + 0.0000i
0.0000 + 0.0000i -0.1500 - 0.6910i*

c=0 eigenvalues

*0.0000 + 0.7071i 0.0000 + 0.0000i
0.0000 + 0.0000i 0.0000 - 0.7071i*



2

3 and 4

5

6

The scaling is relatively low so it is well conditioned

Functions

My power method function gives the largest eigenvector but with the opposite sign as eig function.

Eigenvectors followed by eigenvalues

-0.7762	-0.3758	0.5739	-0.2074
-0.0427	-0.4372	0.6816	-0.9752
0.6171	-0.7392	-0.3630	0.0749
-0.1220	-0.3482	-0.2726	-0.0201
-2.7534	0	0	0
0	6.3259	0	0
0	0	1.5578	0
0	0	0	3.8697

Eigenvector from my power method function

0.3758
0.4372
0.7392
0.3482

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