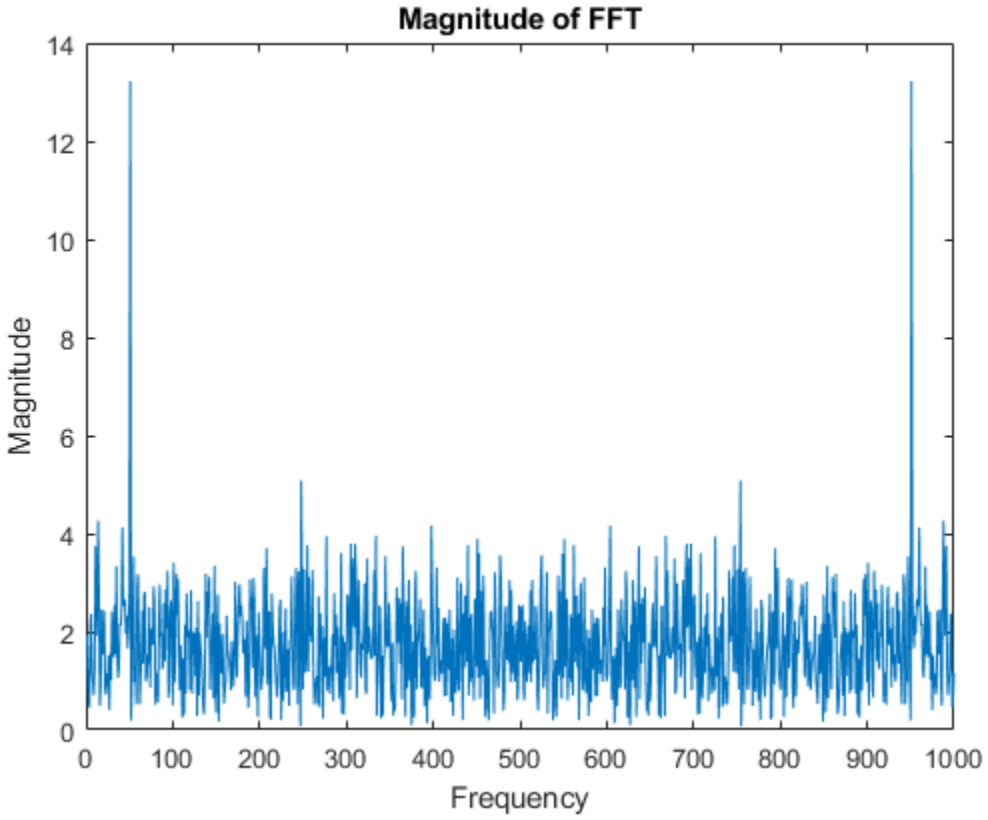
Table of Contents

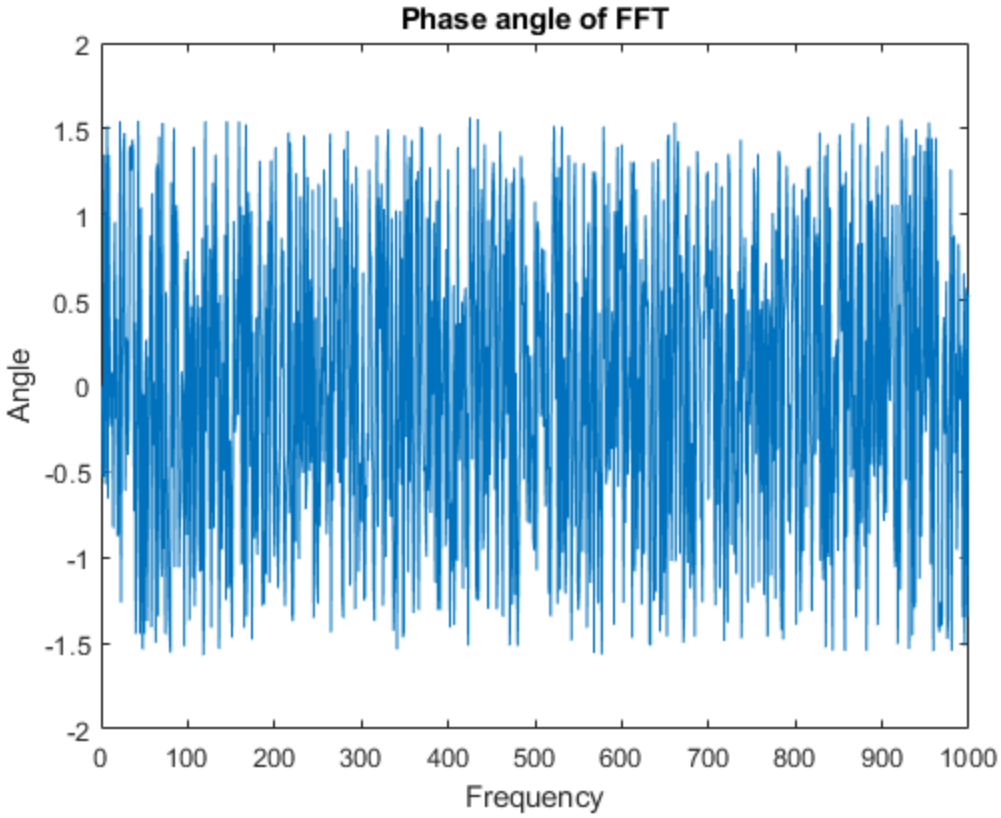
Lab 9

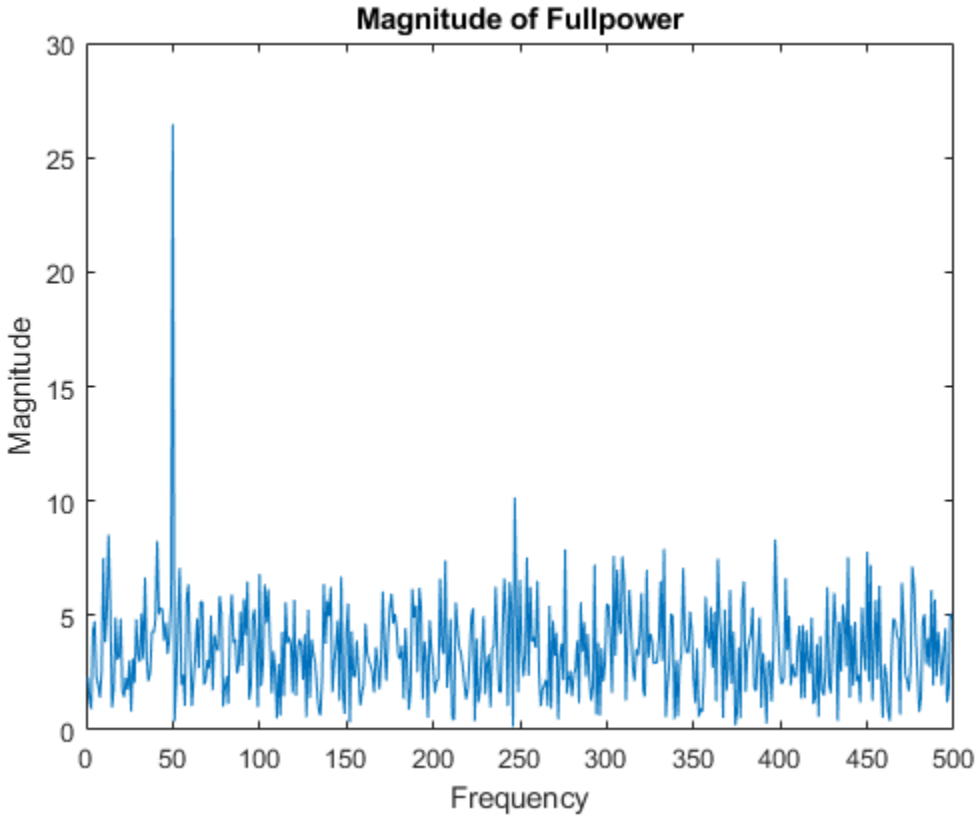
Aero 300 Liam Hood

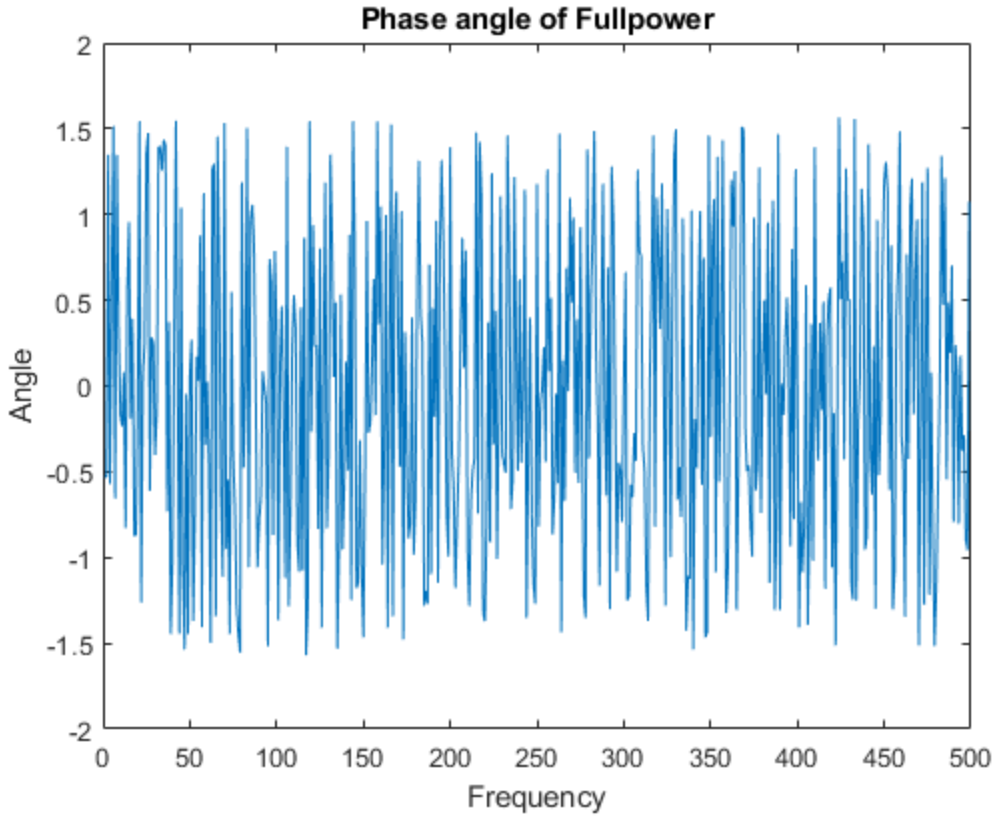
Implement

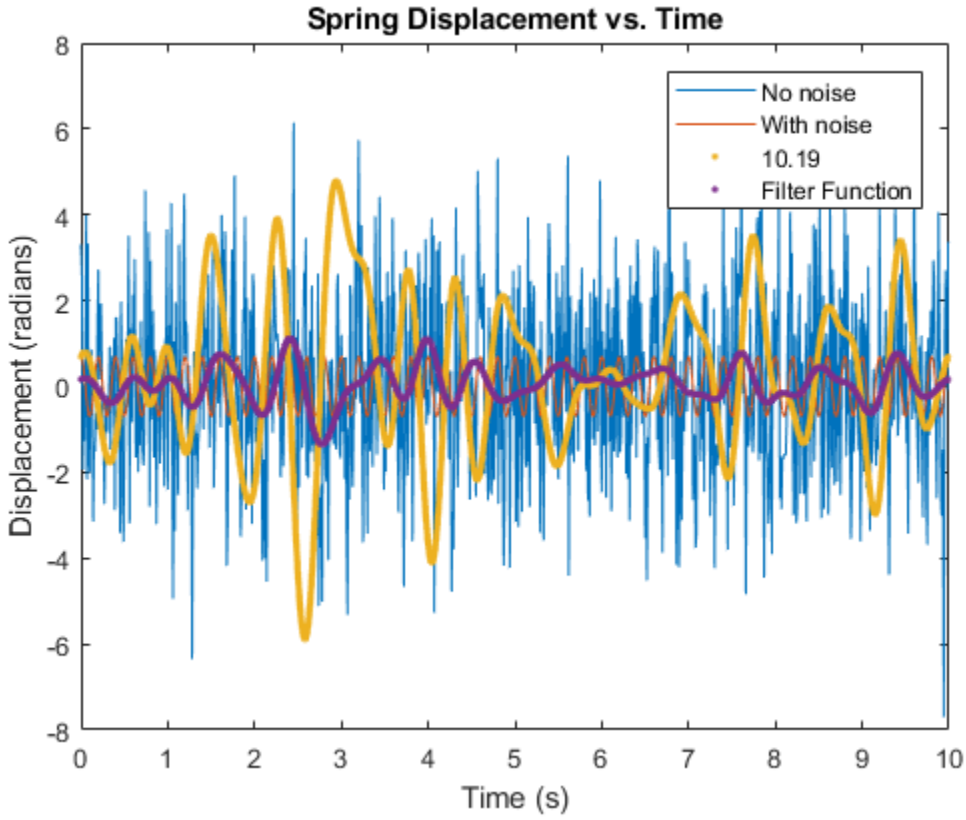
```
The MSD is 50
```




Phase angle of FFT
Angle
Frequency
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
0
100
200
300
400
500
600
700
800
900
1000


Magnitude of Fullpower
Magnitude
Frequency
30
25
20
15
10
5
0
0
50
100
150
200
250
300
350
400
450
500


Phase angle of Fullpower
Angle
Frequency
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
0
50
100
150
200
250
300
350
400
450
500


Spring Displacement vs. Time
Displacement (radians)
Time (s)
No noise
With noise
10.19
Filter Function
8
6
4
2
0
-2
-4
-6
-8
0
1
2
3
4
5
6
7
8
9
10

Function

```
FFT of x
   3.6742 + 0.0000i
   2.4495 - 3.5355i
  -1.2247 - 2.8284i
  -3.6742 + 0.0000i
  -1.2247 + 2.8284i
   2.4495 + 3.5355i

Inverse FFT of x
   3.6742 + 0.0000i
   2.4495 + 3.5355i
  -1.2247 + 2.8284i
  -3.6742 - 0.0000i
  -1.2247 - 2.8284i
   2.4495 - 3.5355i

Built in FFT
   3.6742 + 0.0000i
   2.4495 - 3.5355i
  -1.2247 - 2.8284i
  -3.6742 + 0.0000i
  -1.2247 + 2.8284i
   2.4495 + 3.5355i

My FFT gives the same answer as the built in function. But the
built in function doesn't require x to be even in length.
```

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