



[Lab: Discrete Fourier Transform and](#)

[Course](#) > [Unit 1: Fourier Series](#) > [Signal Processing](#)

> 9. More signal processing

Audit Access Expires Jun 24, 2020

You lose all access to this course, including your progress, on Jun 24, 2020.

Upgrade by Jun 20, 2020 to get unlimited access to the course as long as it exists on the site. [Upgrade now](#)

9. More signal processing

Here is a sample of the audio file analyzed in the script below.

Guitar playing a C major chord

0:09 / 0:09

[Download](#)

Finding frequency peaks (External resource) (1.0 points possible)



```

26 %Modify the minpeak so that very small peaks in harmonics (above 1000 hz) don't show in table
27 minpeak = 1000 %0.1
28 minpeakdist = 25
29 [pks, freq, w, p] = findpeaks(P1, f, 'MinPeakProminence',minpeak, 'MinPeakDistance', minpeakdist);
30 audioData = table(freq, pks, w, p, 'VariableNames', {'Frequency', 'PeakHeight', 'PeakWidth', 'Prominence'})
31
32
33 figure(2)
34 plot(f, P1)
35 title('Single-Sided Amplitude Specturm of X(t)')
36 xlabel('f (Hz)')
37 ylabel('|P1(f)|')
38 xlim([0 2000])
39 hold on
40 plot(audioData.Frequency, audioData.PeakHeight, 'ro')
41 hold off
42

```

▶ Run Script



Output

minpeak =

1000

minpeakdist =

25

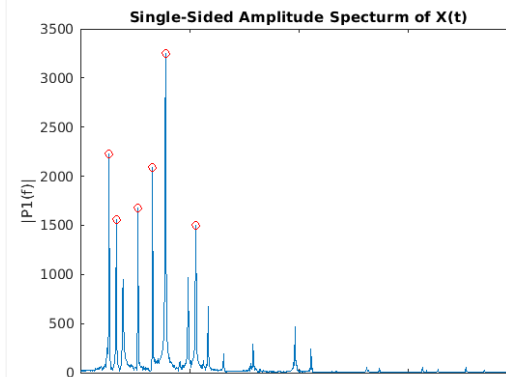
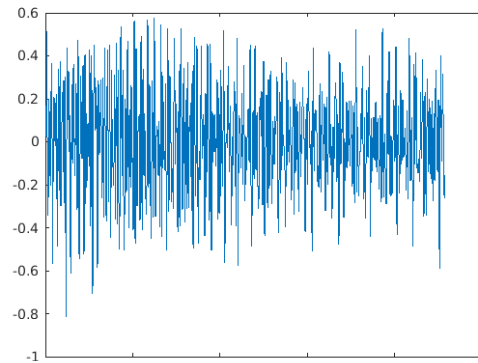
audioData =

6x4 table

Frequency	PeakHeight	PeakWidth	Prominence
131.11	2224.1	2.6725	2213.4
163.89	1563	3.0262	1541.4



264.41	1674.7	3.1848	1660.6
329.96	2089.2	2.4406	1997.3
391.15	3252.8	5.1956	3242.9
528.82	1503.8	5.4054	1488



9. More signal processing

Topic: Unit 1: Fourier Series / 9. More signal processing

Hide Discussion

Add a Post

Show all posts ▼

by recent activity ▼

? i do not understand the question
when i input 235 or higher, i don't have any peaks anymore above 1000hz yet i get the wrong answer...

2

Learn About Verified Certificates

© All Rights Reserved

