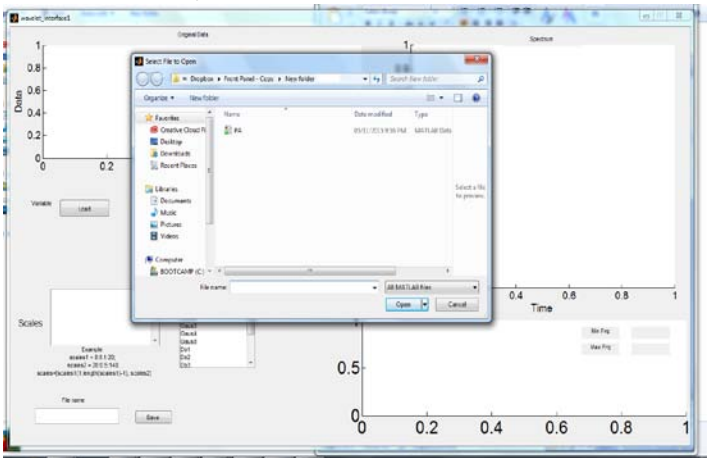
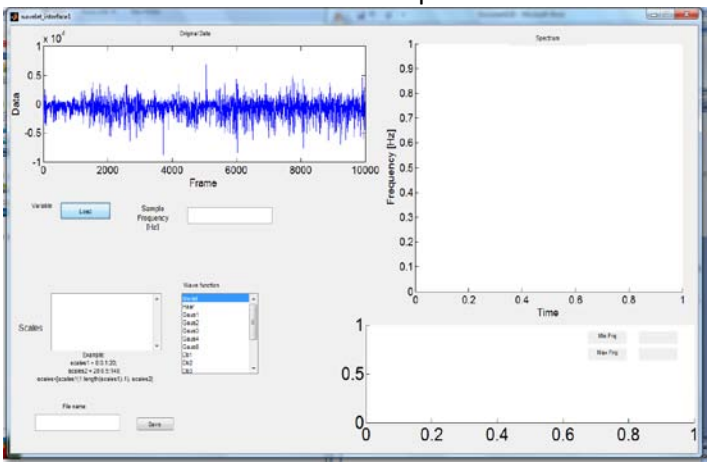
Description:

1. Put the data in the same folder that contains the executable file. This executable file only takes in one variable, it can be saved in *.txt* or *.mat* format.

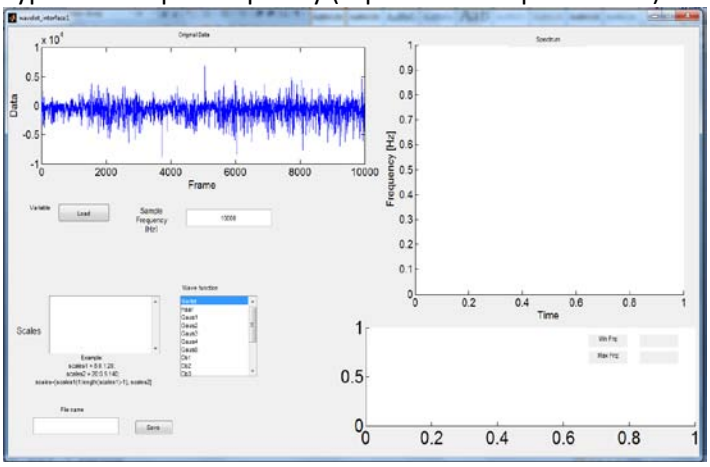
2. To load the data, click the "load" button. A new window will be popped out as below.



3. Choose the desired file and click "open".

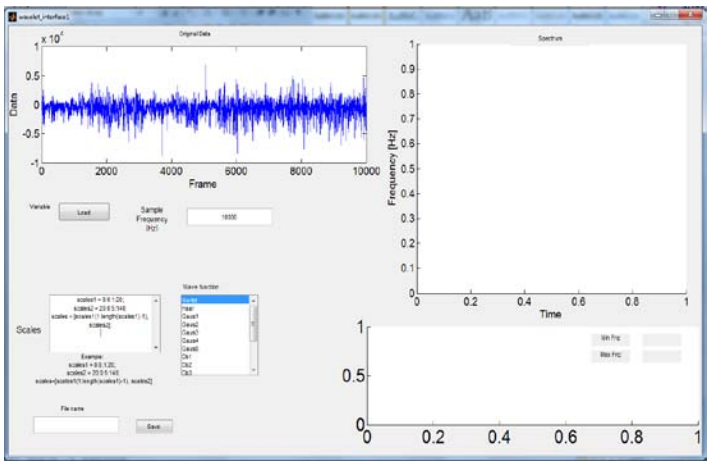


4. Type the sample frequency (repetition rate per second) in the text box.



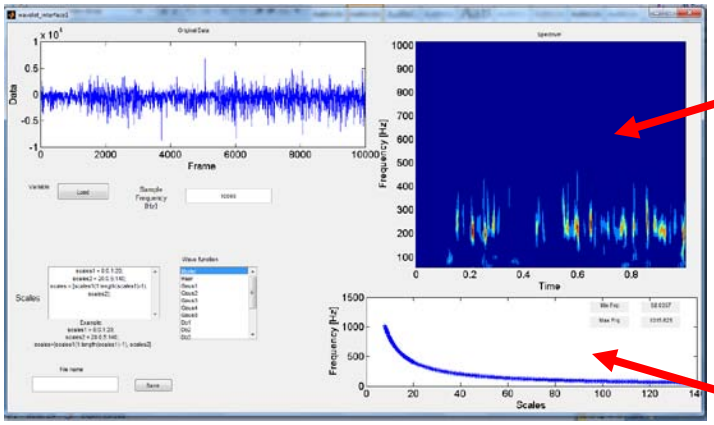
5. Type the desired scales in the text box. The ranges of scales can be varied depending on your application. This executable file only allow the variable name as scales.
   Example 1:
   scales1 = 8:0.1:20;
   scales2 = 20.5:0.5:140;
   scales = [scales1, scales2];

   Example 2:
   scales = 8:1:200;



6. After declaring the scales in the text box, press enter in your keyboard.

7. Choose the wavelet function. For example, if you would like to use "Morlet", click "Morlet" in the wave function list box. If the data size is large, it will take a while to finish the calculation. Here is what it should look like after completion.

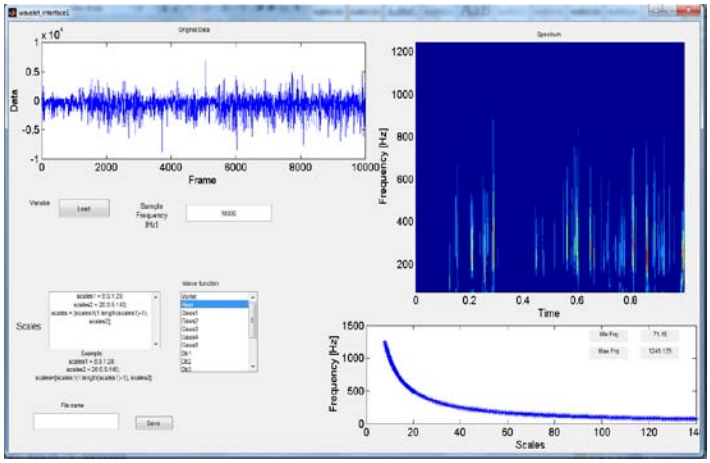


Power spectra (coefficient^2) at different time and frequency

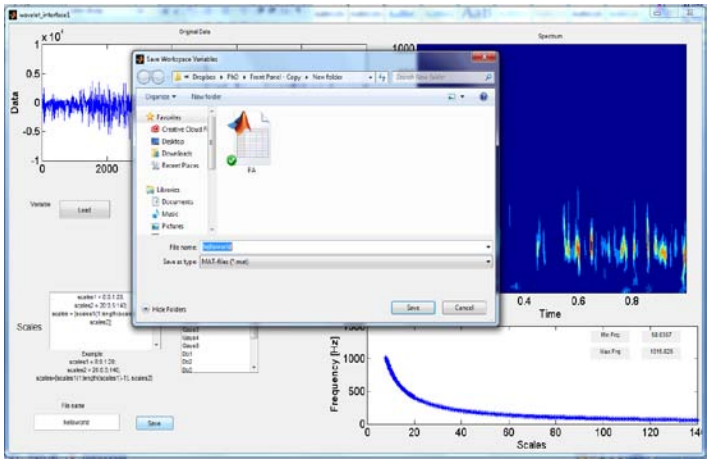
The corresponding frequency from the declared scales

Frequency depends on sampling rate, wave function, and scales.

8. If you would like to check how will the power spectrum look like with different wave function. Simply click on other functions.



9. If you would like to save the result, type the file name you would like to save. Then click the "save" button. It will be saved as a *.mat* file.



10. The final *.mat* file consists of three variables: frq, powerr, time. You can reconstruct the power spectrum diagram with the following code:

```
contourf(time,frq,powerr)
hold on
contour(time,frq,powerr)
hold off
```