Menu_EXAFS_ver4fr.py
To start a calculations from menu “File-Mother Wavelet-WL calculation-Quit” choose “File”.

Sub-menu “Signal”-“Model” will appear..
If you choose “Signal” then
a submenu “File name” and “Fourier” and “k-weight” will appear.
Click “signal” then Windows file manager will arrive for your file choosing. After choosing a signal picture will appear. At the same time a new empty directory with the file name is produced.
Then choose “k-weight” to input k-weight value “0, 1, 2 or 3”. This is a power of k. Press “Enter”, “**spectrum.exe**” is running.

File “K_inform.txt” produced after “Enter” clicking, contains the next information:
1 line – full way to the signal file under processing,
2 line – k-min value,
3 line – k-max value,
4 line – number of points,
5 line – k-weight value.

File “function.txt” contains the weighted signal. ASCCI file format is presented by X-(k-values) Y-(weighted signal values) columns.

File “SpectrumFunction.txt” contains
1 line – full way to the spectrum,
2 line – k-weight value.

Figure with a weighted signal will appear.

Then click “Fourier” to see a Fourier transform of the weighted signal. “**fourier.exe**” is running. ASCII file “Fourier.txt” contains X- (frequencies) and Y- (Modul of the Fourier transform) columns.

To input mother wavelet parameters, click “Mother wavelet” in the main menu. “Morlet parameters” window will appear. Input “kappa” and “sigma parameters” and then click “Accept”. “**morlet.exe**” is running. ASCII file “mother.txt” contains X- (k-axis value), Y-(Re part of the Morlet function) columns. “Motherparam.txt” contains the parameters of the mother wavelet:
1 line – kappa Morelt parameter value,
2 line – sigma Morlet parameter value,
3 line – is arranged for the future.
Figure with Re-part of the Morlet function is appeared.

After choosing “WL calculations” from main menu a submenu “R-parameters”-“WL calculation”-“WL drawing” will appear.
After “R-parameters” clicking a “R-parameters” –window will arrive. Input “R-min” (minimal value for the R axis”, “R-max” (maximum value for the R-axis), “Raxis” (number of points on the R-xais). Then press “Accept”. File “inpParam.txt” will appear with the lines:
1 line – OutputFile,
2 line - E:/DirectoryToManual/Py/Zn_Al_chik0.TXT,
3 line – k-weight number,
4 line – R-min value,
5 line – R-max value,

6 line – number of R-values,
7 line – mother wavelet function number (1-Morlet, 2-Coushy),
8 line – kappa Morlet parameters value,
9 line – sigma Morlet parameter value1.

"WL-calculations" pressing runs "**wl.exe**" to calculate the wavelet transform. ASCII file "OutputFile contains" the transform results. After a note "Stop – Program terminated" in DOS window the calculations are finished. Then press "WL draw" and choose "Color image" or "Black&white image" for the calculation result visualization. The Zoom procedure is available. OutputFile.jpg is formed.

The ASCII files Param_FileName.txt and WL_FileName.txt will appear in the FileName Directory. Format of the Param_FileName.txt is the following:

1-line Input file name:
2-line
3-line Input weight (power of k):
4-line number of points in the experimental spectrum kaxis:
5-line the first k-value in the experimental spectrum kmin:
6-line the last k-value in the experimental spectrum kmax:
7-line
8-line
9-line Morlet parameter kappaMorlet:
10-line Morlet parameter sigmaMorlet:
11-line
12-line output IGOR-file name:
13-line output ORIGIN-file name:
14-line
15-line number of k-points:
16-line number of R-points:
17-line
18-line kmin1:
19-line kmax1:
20-line Rmin:
21-lline Rmax: