User manual for MF-DFA code written by Sadegh Movahed

1: You should write the name of your data file in it

2: To shuffled data set you should select YES here.

3: If you want to surrogate your data, select YES for this option

4: This value shows the number of shuffling data set.

5: Here you should determine the maximum and minimum no. of windows, i.e. if you select "10" for maximum and "2" for minimum, your data set is divided to 2 up to 10 non-overlapping windows.

6: If you want to calculate just H=h(q=2) you should determine q=2., namely, q_max=q_min=2. To find the generalized Hurst exponent i.e. h(q) versus q(moment exponent), must q_min and q_max to be different. Just in this case you can find the singularity spectrum for data set.

7: Here the step of moment exponent is determined.

8: In some case, we have to use double profile for data. It is done by the proper option in my program.

The name of output files are as follows:

1) hurst.txt gives generalized Hurst exponent versus q

2) log_f_s.txt gives the ln (F(s)) versus ln(s)

3) f_s.txt gives the fluctuation function versus "s"

4) tau.txt gives classical multifractal scaling exponent

5) D.txt gives generalized multifractal dimension

6) singularity.txt gives singularity spectrum

7) PDF.txt gives probability density function