

Home Assignment 5

Compute Haar wavelet transform of the time series in <http://th-www.if.uj.edu.pl/zfs/gora/timeseries12/data04.txt> (yes, the date is correct). You can use any of the freely available wavelet packages, but you may find it instructive to develop your own code, in your favourite programming language.

1. Reconstruct the series keeping only $1/2$, $1/4$, $1/8$, $1/16$ largest, to the absolute value, wavelet coefficient. Plot the reconstructed and the original series.
2. Denoise the series using the hard and the mid rules. Plot the denoised and the original series. (Fitting a polynomial will not be very helpful with this particular series.)
3. If you have time to spare, repeat the above tasks with higher order wavelets of your choice.

Have fun!
PFG