Lab. Session n. 3

Ex. 1

Given the wavelets: db2, db4, sym4, coif5

* Determine the corrisponding filters and plot their impulse response and transfer function (this between zero and pi);
* Compute the center frequency and display and the wavelet function and the associated center frequency based approximation.
* Add the scaling function to the F-domain plot;

Ex. 2

1) Given the signal load wnoislop.mat, design an algorithm for signal detranding and denoising, respectively.

2) Generate a signal of duration 4 s assuming a sampling rate of 256Hz consisting of

* a linear trend of slope 0.01
* a peak starting at t=2s and during 10ms with amplitude=2;
* a WGN (white Gaussian noise) with mean=0 and sigma=1;

Design an algorithm for signal detranding and denoising, respectively.