BIOENGENHARIA - LABORATORIO 08

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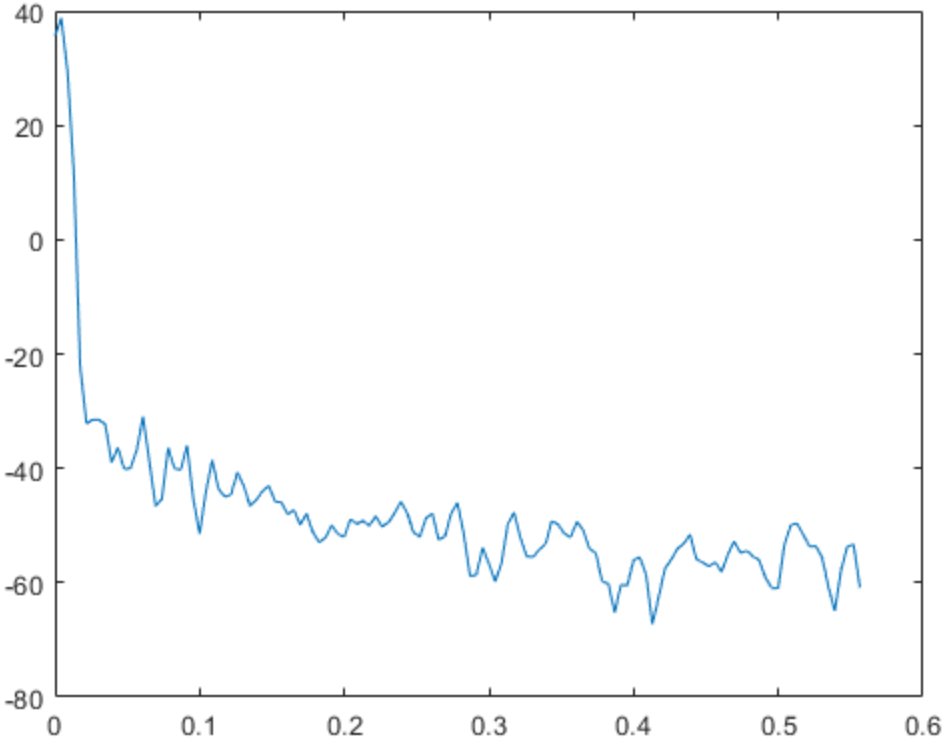
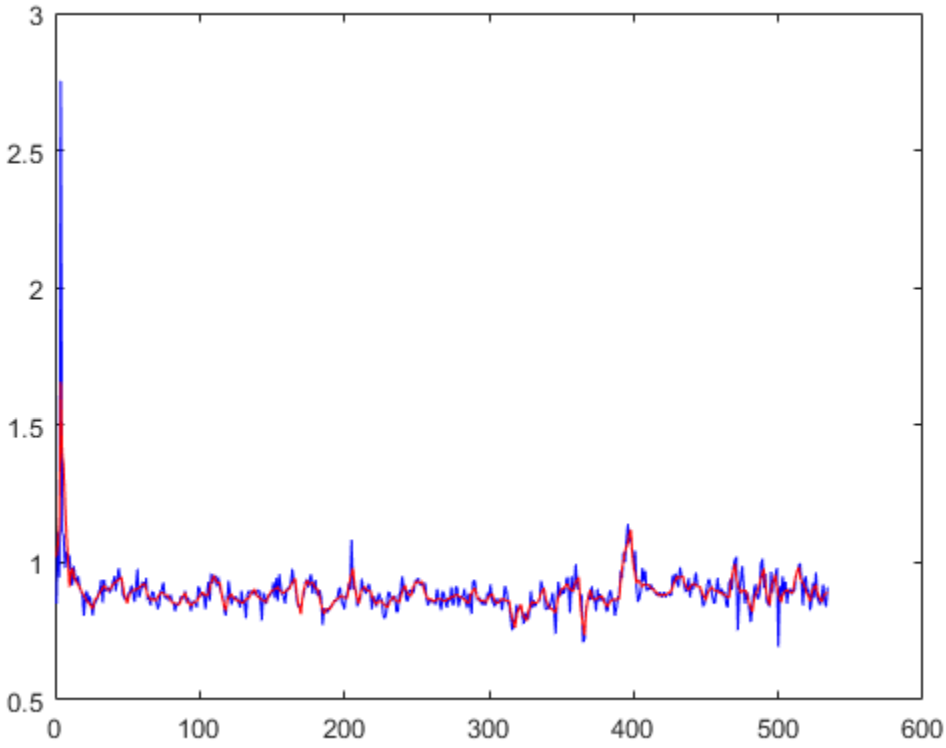
Ex 1

```
% importar o sinal

% 1.a.
data = load("p_11_1.txt");
t = data(:,1);
sig = data(:,2);
n = length(sig);
% sanity check: verificar se o plot de  t é linear
fs = n/t(end);
fft_freq = [0:1:n/2-1]*fs/n;


[pxx,f] = pwelch(sig,[],[],[],fs);
figure(1)
plot(f, 20*log10(pxx))

% plotando

% 1.b.

% após o de-noise, File > Generate Matlab code (denoising process)

% código gerado pelo matlab
wname = 'db2';
level = 2;
sorh = 's';
thrSettings =  [...
    0.684683362173346 ; ...
    0.909570843446462   ...
    ];

sigDEN = cmddenoise(sig,wname,level,sorh,NaN,thrSettings);

% plotando
figure(2)
plot(sig, 'b');
hold on;
plot(sigDEN, 'r');
hold off;

% 1.c. Calcular o AVR
AVR = sum(abs(sig)/length(sig));
```


40
20
0
-20
-40
-60
-80
0
0.1
0.2
0.3
0.4
0.5
0.6


3
2.5
2
1.5
1
0.5
0
100
200
300
400
500
600

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