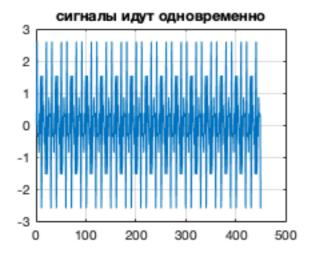
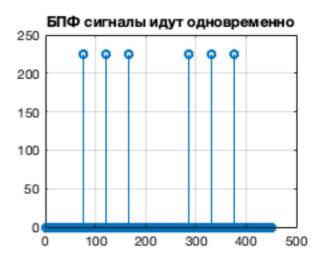
```
%### 5 ЧАСТОТНО-ВРЕМЕННОЕ ПРЕОБРАЗОВАНИЕ ФУРЬЕ ###%
clear;
close all;
Fs = 150;
T = 3;
ts= 0 : 1/Fs : T - 1/Fs;
f1 = 25;
f2 = 40;
f3 = 55;
x = \sin(2*pi*f1*ts) + \dots
    sin(2*pi*f2*ts) +...
    sin(2*pi*f3*ts);
subplot(2,2,1);
plot(x); grid on; title('СИГНАЛЫ ИДУТ ОДНОВРЕМЕННО');
subplot(2,2,2);
stem(abs(fft(x))); grid on; title('\overline{b}\Pi\Phi сигналы идут одновременно');
t1= 0 : 1/Fs : 1-1/Fs;
t2 = 1 : 1/Fs : 2-1/Fs:
t3 = 2 : 1/Fs : 3-1/Fs;
11 = length(t1);
12 = length(t2);
13 = length(t3);
x1(1 : 11) = sin(2*pi*f1*t1);
x1(11 + 1 : 11 + 12) = sin(2*pi*f2*t2);
x1(11 + 12 + 1 : 11 + 12 + 13) = sin(2*pi*f3*t3);
subplot(2,2,3);
plot(x1); grid on; title('Сигналы идут друг за другом');
subplot(2,2,4);
stem(abs(fft(x1))); grid on; title(^{\prime}БПФ сигналы идут друг за другом^{\prime});
[WX, freq] = wft(x, Fs, 'f0', 0.05);
figure;
srf = surf(ts, freq, abs(WX));
set(srf, 'LineStyle', 'none');
xlabel('Время'); ylabel('Частота'); zlabel('Амплитуда');
```

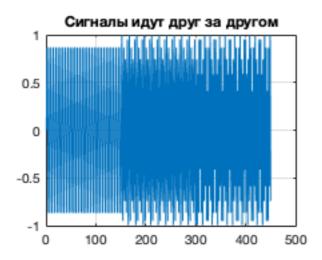
```
Estimating window parameters... Optimal frequency bin width was determined to be 0.429394 Hz (rounded to 4 \times 10^-1)
```

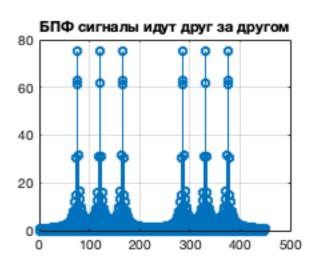
Signal preprocessing (detrending, then filtering) and padding (31 values to the left and 31 to the right)...

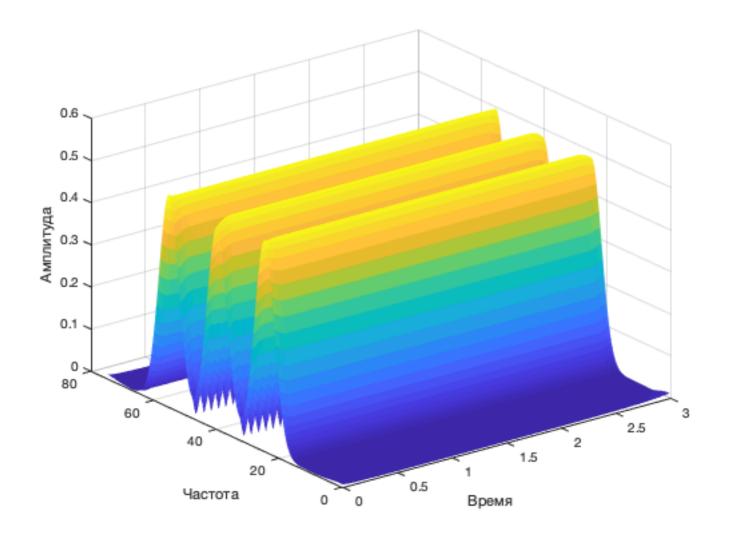
Applying predictive padding: to the left - 100%; to the right - 100%; Calculating Windowed Fourier Transform (188 frequencies from 0.000 to 74.8 00): 100%











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