
3.Labradorijas Darbs

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Signalu apstrade

Merki:

- Iemacities apstradat signalu un uztaisit grafiku no datiem

Darba programma:

```
function y = lab3(t)

if nargin == 0
    t = 0:0.01:5;
end
%%Datu filtracija
%sin
t_sin_f = (t>=4.5) & (t<=5);
t_sin = t(t_sin_f);
%saw
t_saw_f = (t>=0)&(t<0.5);
t_saw = t(t_saw_f);
%const
t_const_f = (t>=3.5)&(t<4.5);
t_const = t(t_const_f);
%zero
t_zero_f = (t>=1.5)&(t<3.5);
t_zero=t(t_zero_f);
%noise
t_noise_f = (t>=0.5)&(t<=1.5);
t_noise=t(t_noise_f);
```

sinusoida

```
A0=0; A= 1.5;
```

```
T = (5-4.5)/2;f=1/T;
delay = 1.5;
y_sin=A0+A*sin(2*pi*f*(t_sin-delay));
%plot(t_sin,y_sin)
%axis([xmin xmax ymin ymax])
%axis([0 5 -1.5 1.5])
```

Lineari mainigais signals

```
%k = (yA-yB)/(tA-tB);
k = (1-0)/(0-0.5);
delay = 0.5;
y_saw = k*(t_saw-delay);
%hold on
%plot(t_saw,y_saw)
```

konstantes signals

```
y_const = 1.5+zeros(size(t_const));
%plot(t_const,y_const)
```

Nulles signal

```
y_zero = zeros(size(t_zero));
%plot(t_zero,y_zero)
```

troksna signals

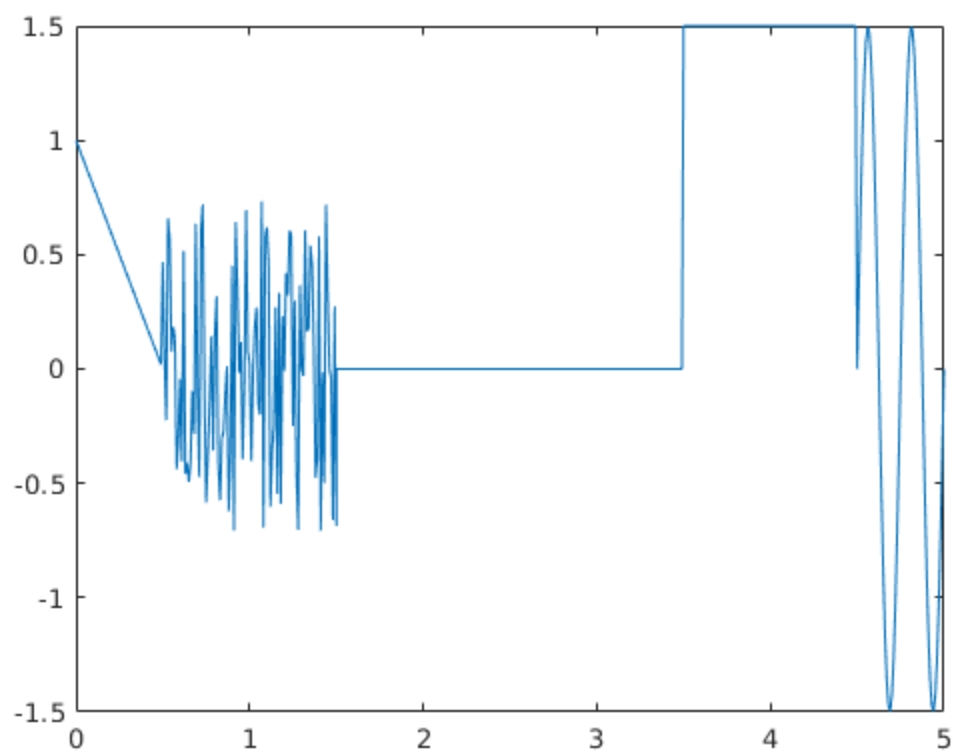
```
y_noise = 1.5*rand(size(t_noise))-0.75;
%plot(t_noise,y_noise)
```

Visu signalu apvienosana

```
t = [t_saw,t_noise,t_zero,t_const,t_sin];
y = [y_saw,y_noise,y_zero,y_const,y_sin];
if nargin == 0
    plot(t,y)
    y=[];
end
```

```
ans =
```

```
[]
```



Secinājumi:

ir iemacits ka apstradat signalu datus un ka uztaisit grafiku no tas datiem

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