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```
R1=1;R2=2;R3=3;R4=4;R5=5;R6=6;R7=7;
E1=1; E2=2; E3=3;
%Norakstit koeficentus
R=[R1+R2+R3 -R2 0;
    -R2 R2+R4+R5 -R5;
    0 -R5 R5+R6+R7]

E = [E1 -E2 -E3]'
%Vinai jabut E = [E1;
%                 E2;
%                 E3] Bet mes ar transponejam ar zime '
%Meklesim kontrstravu Ik - Istrava Kkonturs
Ik = R\E % gausa metode ar zime \
```

```
R =

     6    -2     0
    -2    11    -5
     0    -5    18


E =

     1
    -2
    -3


Ik =

    0.0735
   -0.2795
   -0.2443
```

# Uzdevums: Atrast IR2, UR2, PR2 -?

```
IR2 = Ik(1) - Ik(2) % no vektora Ik - mes izsaucam () - elementu
 pirmo, otru...
UR2 = IR2*R2
PR2 = UR2*IR2
```

```
IR2 =

    0.3530
```

```
UR2 =

    0.7060
```

```
PR2 =

    0.2492
```

# Cits variants

```
%Tagad mums 3 laikas momenti
% un E1 E2 E3 bus 3 veribas
E1 = [1 -1 0];
E2 = [2 -2 0];
E3 = [3 -3 0];
%aliksim matricai
E = [E1; E2; E3]
```

```
E =

     1    -1     0
     2    -2     0
     3    -3     0
```

# Meklesim konturstrave

```
Ik = R\E
% Pirma rinda - pirma konturstrave, otra- otra un ta talak
```

```
Ik =

    0.2847   -0.2847         0
    0.3540   -0.3540         0
```

```
    0.2650   -0.2650         0
```

# Uzdevums atrast IR 3 UR3 PR3 - ?

```
IR3 = Ik(1,:) % nozime, ka mes panemsim 1 rindu
UR3 = IR3*R3
PR3 = UR3.*IR3 % punkts jaliek, lai sareizinat elementu uz elementu no
 matricai
```

```
IR3 =

    0.2847   -0.2847         0


UR3 =

    0.8540   -0.8540         0


PR3 =

    0.2431    0.2431         0
```

# Cits variants

Tagad mums bus laika mainigais signals

```
t = 0:0.01:1;

E1 = sin(2*pi*3*t);
%E2 = 5; %ka pareizi pierakstit kanstanti?
E2 = 5+zeros(size(t));
E3 = cos(2*pi*7*t);
```

# risinasim vienadojumu sistemas

lai atrast konturstravas, tagad jau mums ir 101 3 vienadojumu sistema

```
E = [E1; -E2; -E3];
Ik = R\E;
```

# Uzdevums bus

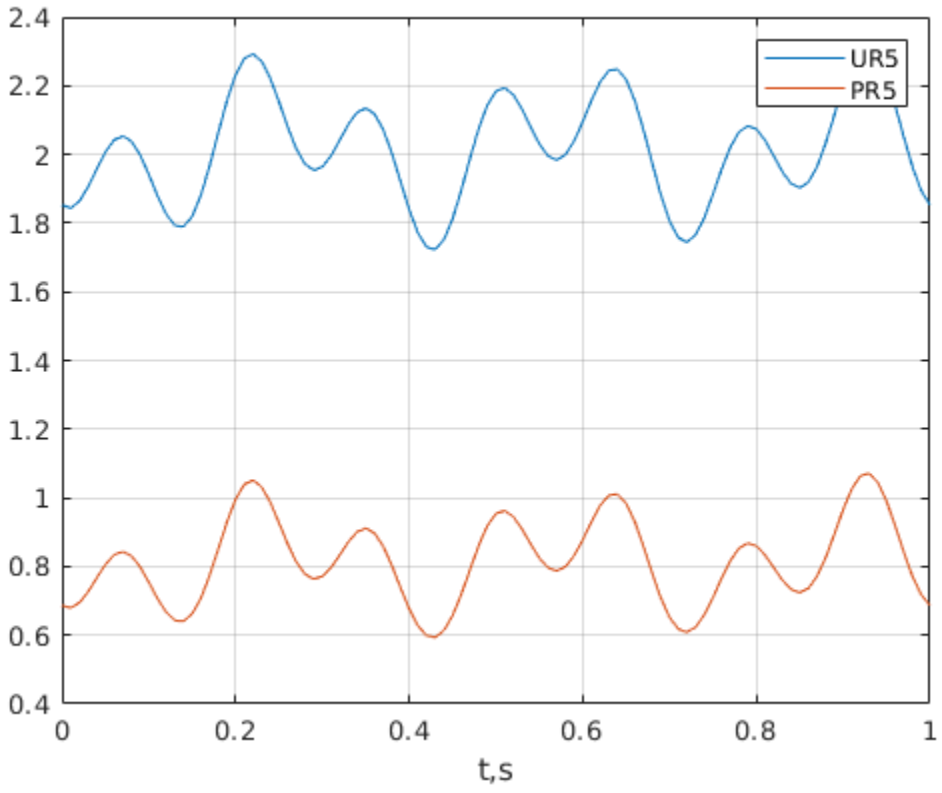
atrast un uzzimet UR5, PR5 - ?

```
IR5 = Ik(3,:)-Ik(2,:);
UR5 = IR5*R5;
```

```
PR5 = UR5.*IR5; % mes liksim beiga ;;;;; lai nebut daudz atbildes
```

# zimesim

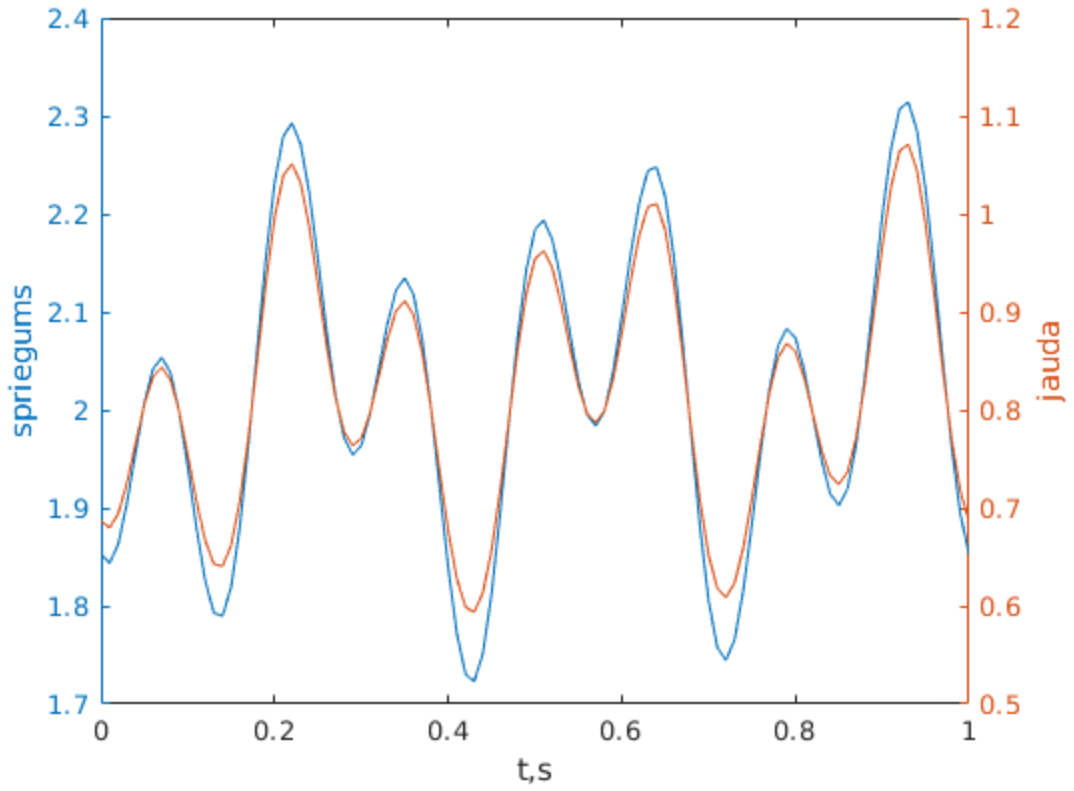
```
plot(t,UR5,t,PR5)
legend('UR5','PR5')
xlabel('t,s')
grid % grid lai uztaisit grafika rutinu
```




# Cits panemiens, lai nebutu pretruna

ka uz y asi gan Volti, gan Wati

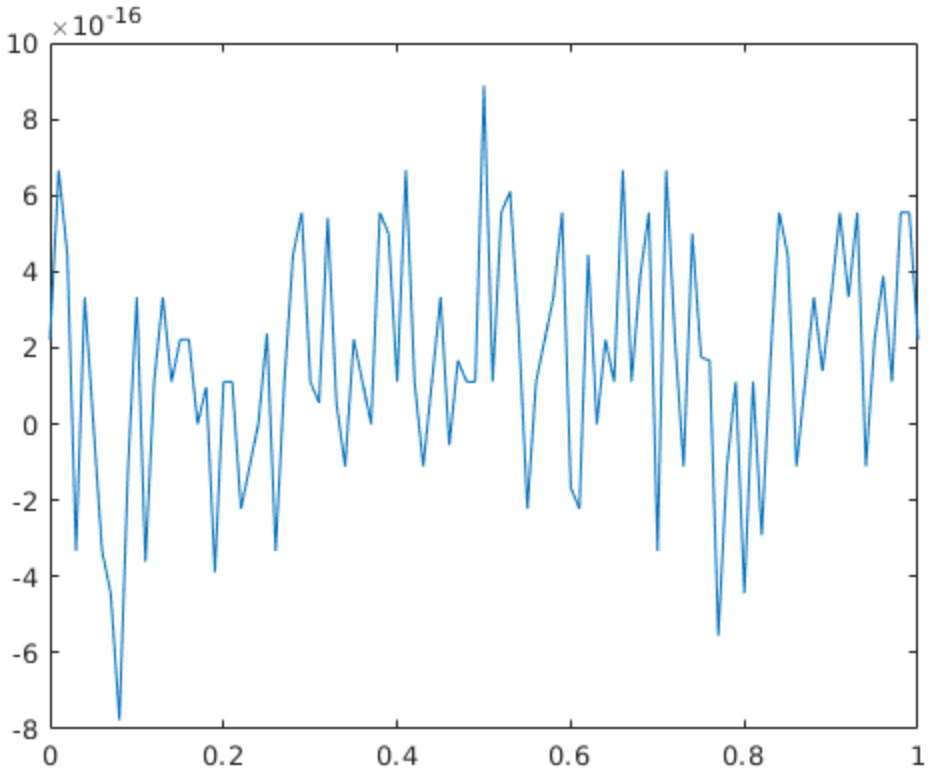
```
figure
yyaxis left
plot(t,UR5)
ylabel('spriegums')

yyaxis right
plot(t,PR5)
ylabel('jauda')

xlabel('t,s')
```




# Rezultatu parbaude

parbaudisim Kirhofa spriegumu likums 3.konturam UR5+UR6+UR7 == -E3 Parnesisim visu viena puse UR5+UR6+UR7+E3==0 un pielidzinasim kadam mainigajam Utst Utsts = UR5+UR6+UR7+E3; un to uzzimesim

```
UR6 = Ik(3,:)*R6;
UR7 = Ik(3,:)*R7;
Utst = UR5+UR6+UR7+E3;
figure(3),plot(t,Utst)
```




# velamais rezultats 0

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