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```
% Szerda - 2024.03.20
% Ketkapu karakterisztika meghatarozasa
R = 50;
r = 40;
% x = [U1, U2, Ua, Ia, Ub, Ib] ; s = [I1, I2]
A = [2/R -1/(2*R) -1/R 0 0 0;...
     -1/R 0 1/R 1 0 0;...
     -1/(2*R) 3/(2*R) 0 0 0 1;...
     0 0 1 0 0 r;...
     0 0 0 -r 1 0;...
     0 1 0 0 -1 0]
B = [1 0;0 0;0 1;0 0;0 0;0 0]
% Ismeretlenek ertekeknek meghatarozasa
x = A \ B
% Ennek felso ket sora (U1,U2) adja az (I1,I2)-tol fuggo reszt
RR = x(1:2,1:2)

A =
    0.0400    -0.0100    -0.0200         0         0         0
   -0.0200         0     0.0200     1.0000         0         0
   -0.0100     0.0300         0         0         0     1.0000
         0         0     1.0000         0         0    40.0000
         0         0         0   -40.0000     1.0000         0
         0     1.0000         0         0    -1.0000         0

B =
     1     0
     0     0
     0     1
     0     0
     0     0
     0     0

x =
   35.0000   -8.5714
   20.0000   11.4286
   10.0000  -22.8571
    0.5000    0.2857
   20.0000   11.4286
   -0.2500    0.5714

RR =
   35.0000   -8.5714
   20.0000   11.4286
```

Atteres másik karakterisztikara

Terjunk at G-re

```
GG = inv(RR)
```

```
% Terjunk at K-ra (i1,u2) = K*(u1,i2)
% A es B kozott kell oszlopokat cserelni
% A(:,1) <--> B(:,1)
% Vigyazni, hogy a csere (-1)-es szorzast jelent
AK = [-B(:,1) A(:,2:end)]
BK = [-A(:,1) B(:,2)]
xk = AK\BK
KK = xk(1:2,1:2)
```

```
GG =
```

```
0.0200    0.0150
-0.0350    0.0613
```

```
AK =
```

```
-1.0000   -0.0100   -0.0200         0         0         0
         0         0         0.0200     1.0000         0         0
         0         0.0300         0         0         0         1.0000
         0         0         1.0000         0         0        40.0000
         0         0         0    -40.0000     1.0000         0
         0         1.0000         0         0     -1.0000         0
```

```
BK =
```

```
-0.0400         0
 0.0200         0
 0.0100     1.0000
         0         0
         0         0
         0         0
```

```
xk =
```

```
0.0286    0.2449
0.5714   16.3265
0.2857  -20.4082
0.0143    0.4082
0.5714   16.3265
-0.0071    0.5102
```

```
KK =
```

```
0.0286    0.2449
0.5714   16.3265
```

Ellenorizzuk a G-t!

```
AG = [-B A(:,3:end)]
```

```
BG = -A(:,1:2)
```

```
xg = AG\BG;
```

```
GG2 = xg(1:2,:)
```

```
AG =
```

```
-1.0000         0   -0.0200         0         0         0
         0         0   0.0200     1.0000         0         0
```

```
      0  -1.0000      0      0      0  1.0000
      0      0  1.0000      0      0 40.0000
      0      0      0 -40.0000  1.0000      0
      0      0      0      0  -1.0000      0
```

BG =

```
-0.0400  0.0100
 0.0200      0
 0.0100 -0.0300
      0      0
      0      0
      0  -1.0000
```

GG2 =

```
 0.0200  0.0150
-0.0350  0.0612
```

Lezaras hatasa

Ketkapukent oldjuk meg mint a multoran

Lezaras hatasa

Teljes egyenletrendszerkent

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