KILOBOT – MODEL V PROSTORU STANJ Z OPAZOVALNIKOM

Skupini 6 in 7

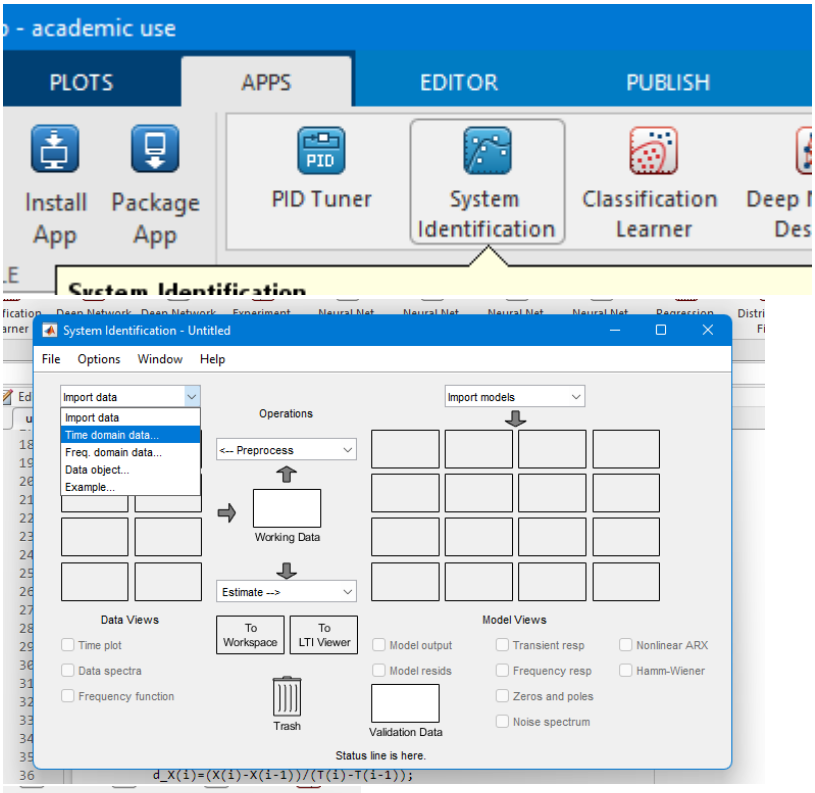
30. MAJ 2022
UM FERI

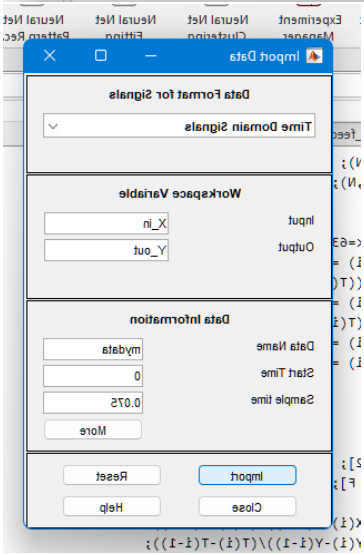
1. Model v PS

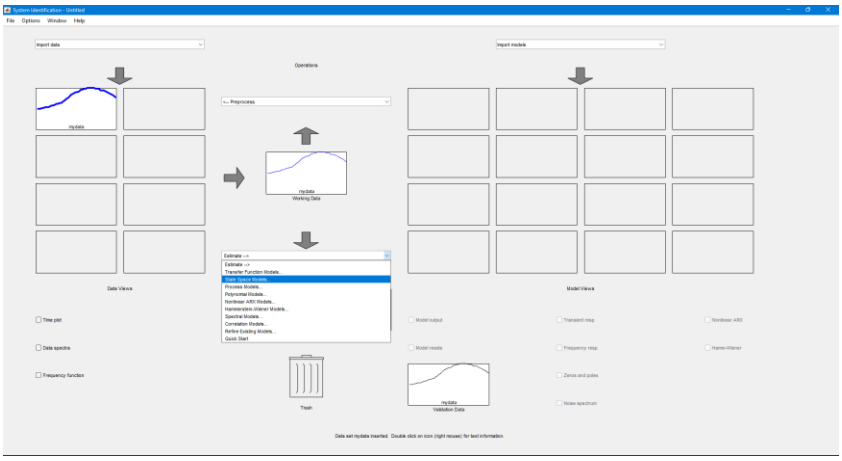
1.1. Združevanje vhodov in izhodov v matrike

```
X_in = [x1,x2];
Y_out=[X, Y, F];
```

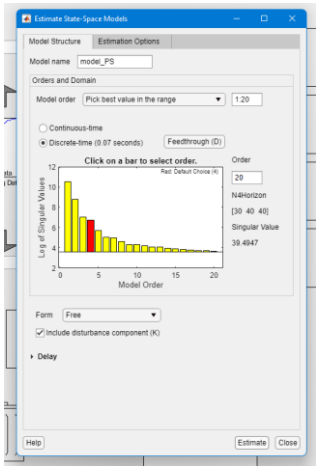
1.2. Vnos podatkov v identifikator

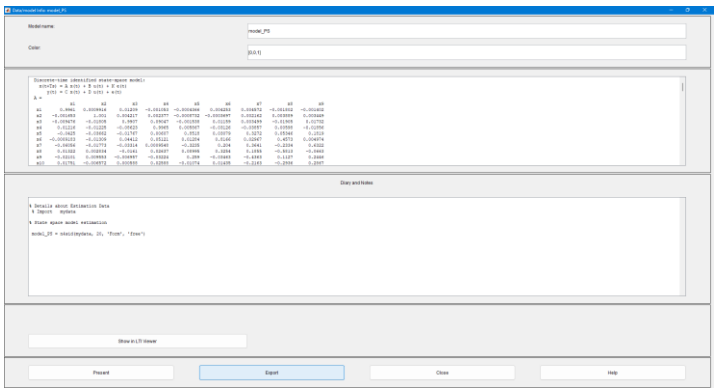






1.3. Identifikacija in izvoz modela





2. Regulator stanja in opazovalnik

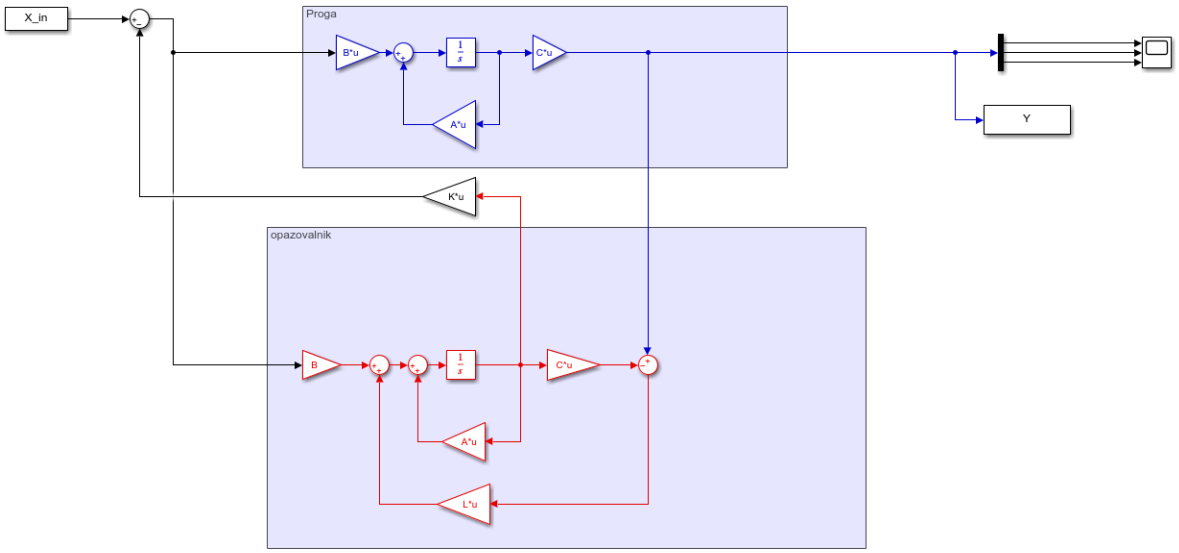
2.1. Koda za dodatne parametre simulinka

```
%Model v prostoru stanj in observer
model_ps

A=model_PS.A;
B=model_PS.B;
C=model_PS.C;
D=model_PS.D;
K=model_PS.K;


L_T=place(A',C',[-30 -29 -28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11]);
L=L_T';
X_in=[T x1 x2]
```

2.2. Simulink shema:



3. Priloge:

- Txt z podatki (testfile1.txt)
- Matlab datoteka za obdelavo podatkov(untitled.m)
- Simulink model regulatorja stanj z opazovalnikom(model_z_opazovalnikom.slx)
- Datoteka s shranjenimi spremenljivkami(matlab.mat)