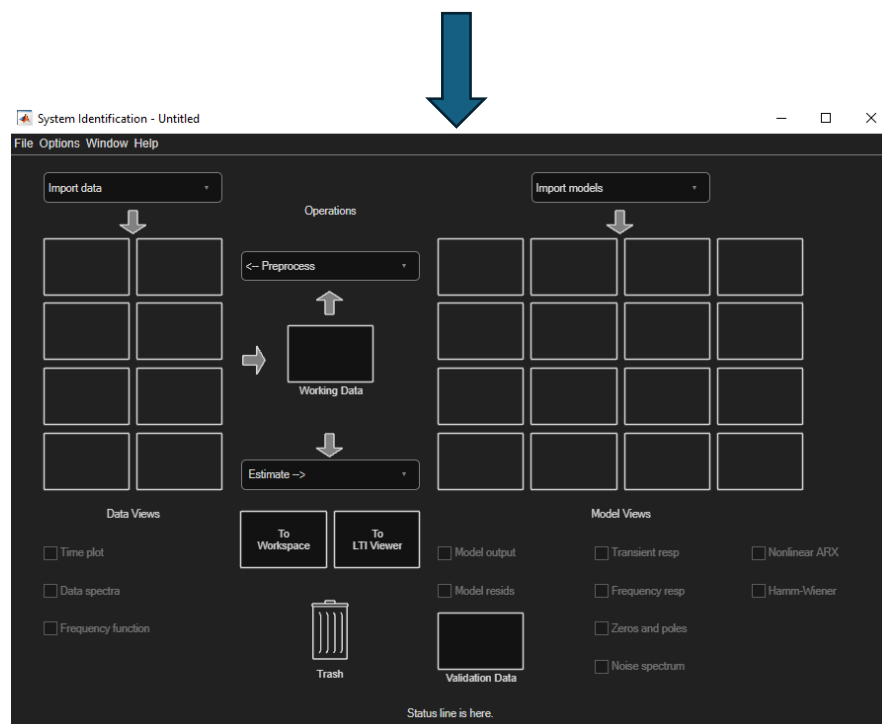
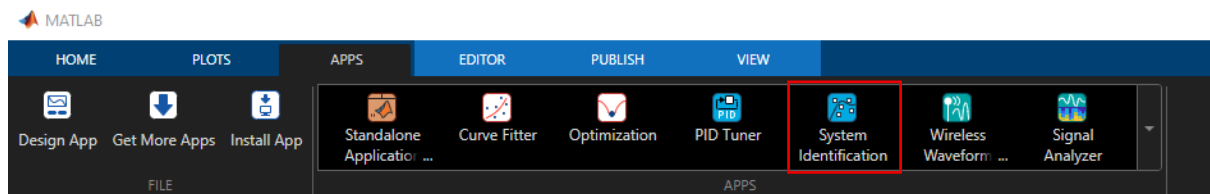


Control Systems Toolbox - System Identification App

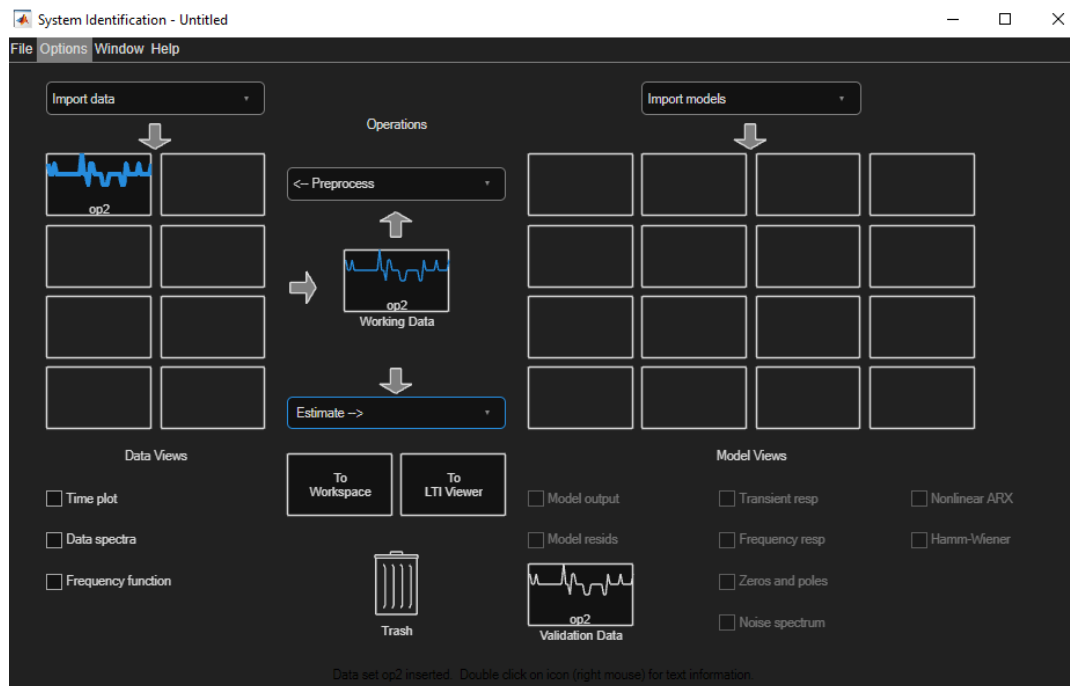
1. Once you have loaded in your workspace and created the working variables for the tank heights, input signals etc. Open the system identification app from the apps tab.



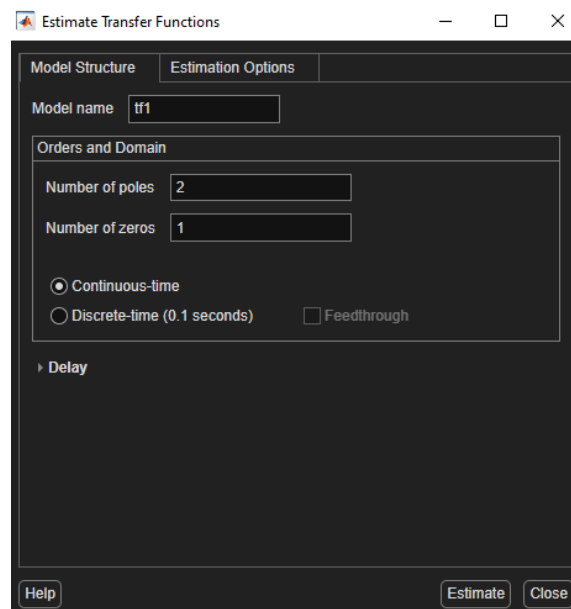
2. From the **Import data** dropdown, select: Time domain data. Then add the variable names for the input and output signals (for the operating point you are modelling). Make sure to input the correct sample time.



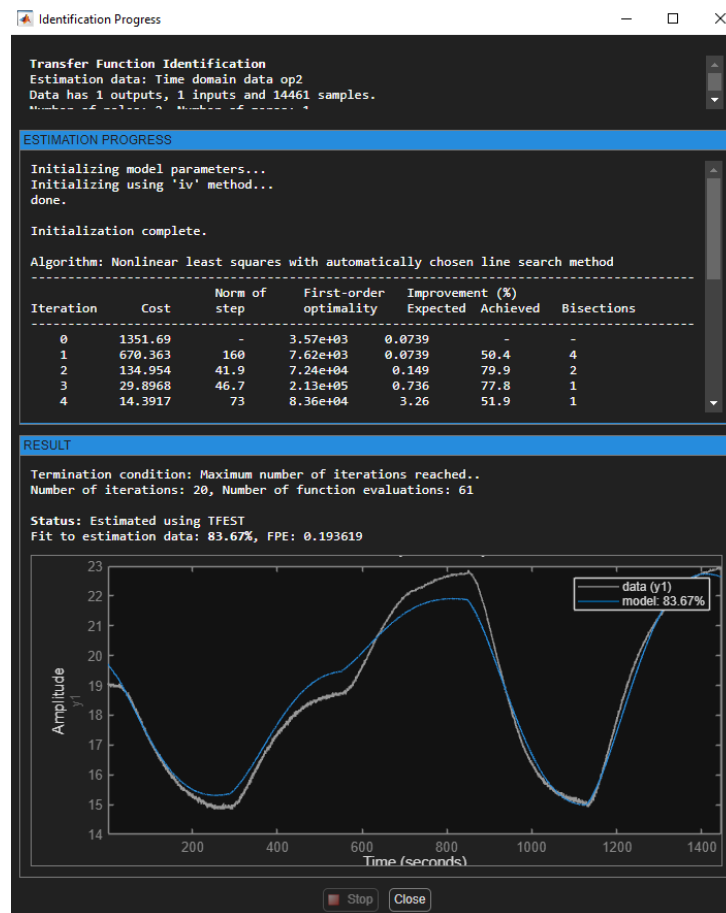
3. You should see the data loaded in. Next select Estimate > Transfer Function Models.



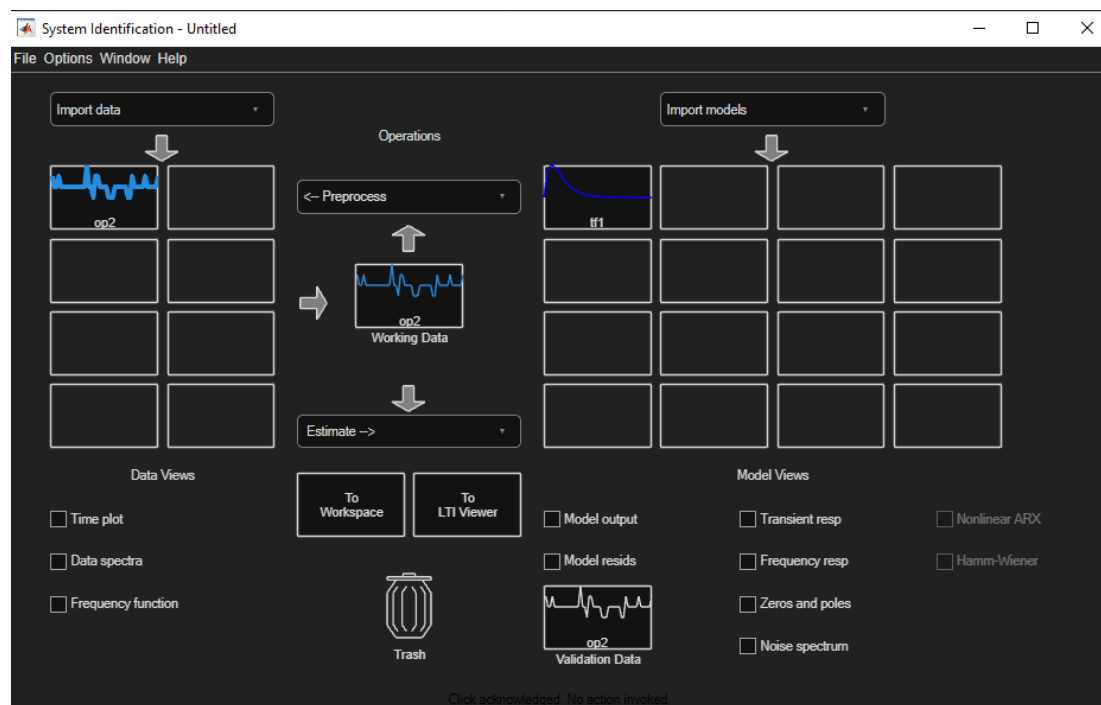
4. Select the number of poles and zeros you want the estimated TF to have.



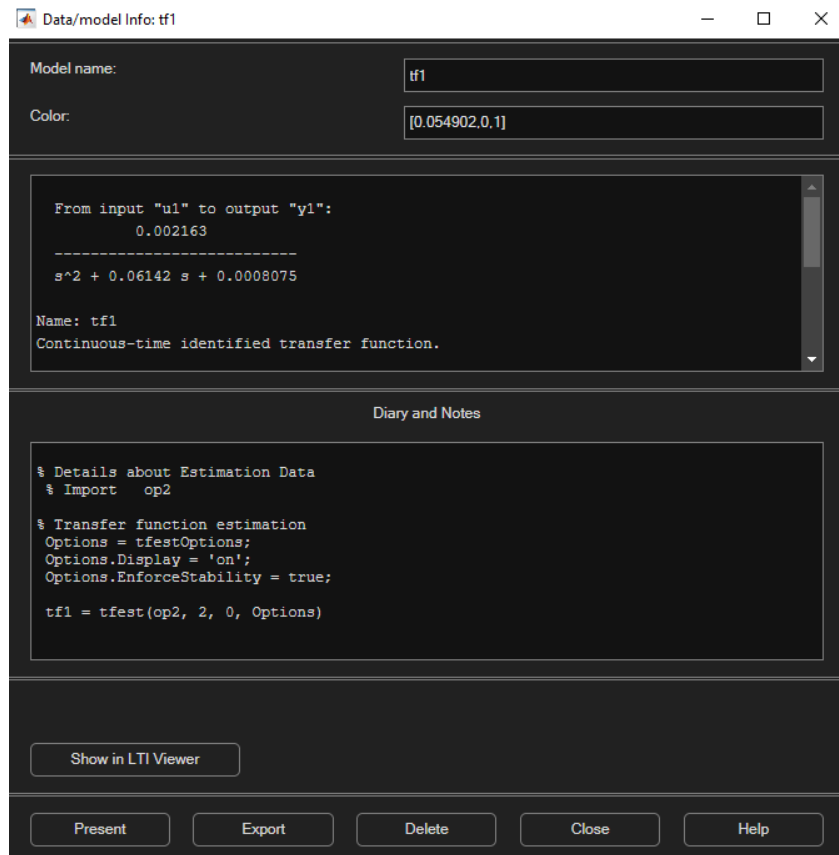
Select Estimate.



To view the model – click on tf1.



This will display the fitted model:



The screenshot shows a MATLAB window titled "Data/model Info: tf1". It contains the following information:

Model name:

Color:

From input "u1" to output "y1":
0.002163

 $s^2 + 0.06142 s + 0.0008075$

Name: tf1
Continuous-time identified transfer function.

Diary and Notes

```
% Details about Estimation Data
% Import    op2

% Transfer function estimation
Options = tfestOptions;
Options.Display = 'on';
Options.EnforceStability = true;

tf1 = tfest(op2, 2, 0, Options)
```

Show in LTI Viewer

Present Export Delete Close Help