Demonstration 1 - MATLAB Review

ME3060 - Dynamics Modeling and Controls Lab

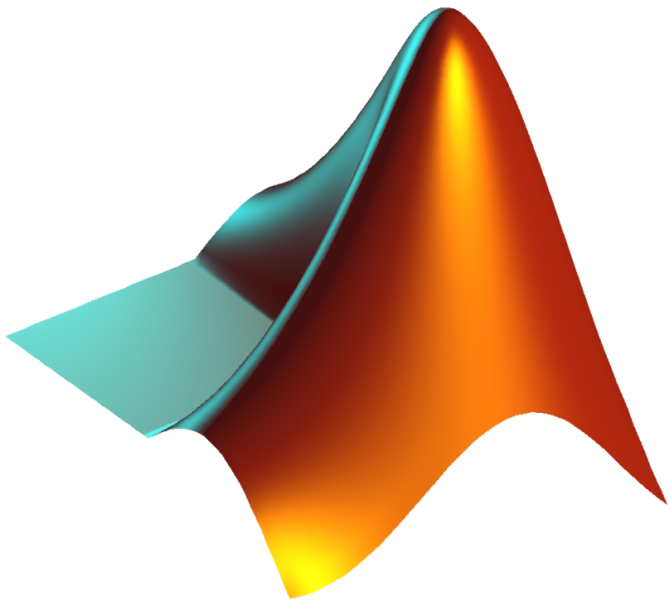
Mechanical Engineering

Tennessee Technological University

Topic 2 - Using Simulink

Topic 2 - Using Simulink

- What is Simulink?
- Create a Model
- Run the Model
- View and Export Results



What is Simulink?

Simulink is a MATLAB-based graphical programming environment for modeling, simulating and analyzing multidomain dynamical systems. Its primary interface is a graphical block diagramming tool and a customizable set of block libraries. It offers tight integration with the rest of the MATLAB environment and can either drive MATLAB or be scripted from it. Simulink is widely used in automatic control and digital signal processing for multidomain simulation and model-based design.[2][3]

Text: Wikipedia

Create a Model

- While installing MATLAB you can choose to include simulink. If you did not can can install it through the *Add-Ons Explorer* in the home tab.
- Open MATLAB and start simulink by entering the following in to the command window.

```
>> simulink
```

- Wait for Simulink to open, and then click blank model.

$\rightarrow$ A simulink file is called a *model* (.slx)

Create a Model

You begin with a blank model (as you selected) and the possibilities are endless. Alternatively you could start with a template.

Click on the Library Browser to find components to add to the model.

Run the Model

View and Export Results