# Lab 1: Introduction to MATLAB & Simulink

Objective:

• Familiarize students with MATLAB and Simulink interface.  
• Learn to represent a transfer function in MATLAB.  
• Analyze system response using step response and extract rise time, settling time, etc.

Tasks:

1. Create a transfer function in MATLAB (e.g., G(s) = 1 / (s^2 + 10s + 20)).  
2. Modify the numerator and denominator of the transfer function and observe the effect.  
3. Plot the step response and extract system characteristics using `stepinfo()`.  
4. Write a report with analysis of original vs. modified response.

Deliverables:

• MATLAB code and plot.  
• Step response characteristics (rise time, settling time).  
• Structured report.