Unit 2: Transfer Function Analysis of Dynamic Systems

This unit has been adapted from the MATLAB curriculum module <u>Transfer Function</u> Analysis of Dynamic Systems ([Allie, 2024]).

Additional background material is available in Units $\underline{3}$ and $\underline{4}$ of the lecture notes for $\underline{\text{EG-150}}$ Signals and Systems ([Jobling, 2024])

You can run the original MATLAB LiveScripts by visiting <u>Transfer Function Analysis of</u> Dynamic Systems and following the link to **Open in MATLAB Online**.

This will install a project called

Repositories/Transfer-Function-Analysis-of-Dynamic-Systems on your MATLAB Drive. If you have the *MATLAB Connector* installed (see instructions on <u>Canvas</u>) the project will be automatically synced to your desktop.

Run the project by finding and opening the file TransferFunctions.prj.

The notes and the lab that follow are based on this project and some of the exercises, activities and homework problems need it to be available.

- Unit 2.1 Laplace transforms and LTI systems
- Unit 2.2: Transfer Function Basics
- Unit 2.3: Pole-Zero Analysis
- Lab 2: Frequency Domain Analysis