

ECEN 4638: Lab X.1PI

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1 Description

This lab will further explore the Torsional Disc System. The system setup will be similar to what was used in labX.1P; only the bottom disc of the TDS will be used and the four weights will be set at a radius of 6.5cm.

2 System Model

2.1 Calculated Parameters

2.2 Transfer Functions

3 Matlab Analysis

3.1 Time Domain

3.2 Frequency Domain

4 Experimental Analysis

4.1 Time Domain

4.2 Frequency Domain

5 PI Controller Design