

ECEN 4638: Lab X.1PI

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Contents

1	Description	2
2	System Model	2
2.1	Calculated Parameters	2
2.2	Transfer Functions	2
3	Matlab Analysis	2
3.1	Time Domain	2
3.2	Frequency Domain	2
4	Experimental Analysis	2
4.1	Time Domain	2
4.2	Frequency Domain	2
5	PI Controller Design	2

List of Figures

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