

Instructional Objectives for Roberts Chapter 10 – Laplace Transform Analysis of Signals and Systems

10.1 – Introduction and Goals

10.2 Transfer functions from Circuits and System Diagrams

Compute the transfer function of an electrical circuit

10.3 System Stability

Determine system stability based on its transfer function

Determine stability of a system based on its pole-zero plot

Given a transfer function, determine whether a stable, causal inverse system can exist

10.4 Parallel, Cascade and Feedback Connections

Compute the overall transfer function of a system with series/parallel connections