

Module 12 - Second Order Time Response

ME3050 - Dynamics Modeling and Controls

Mechanical Engineering

Tennessee Technological University

Topic 1 - Free and Forced Response

Topic 1 - Free and Forced Response

- Second Order Free Response
- Second Order Step Response
- Response and System Stability
- Components

Model and EOM

Consider the model

Solution with Laplace Transforms Method

Sketch Response Equation

Stability in Dynamic Systems

A dynamic system is stable if ...

References

- System Dynamics, Palm III, Third Edition - Section 8.1 - Response of First Order Systems - pg. 475