MEEG 311 – Lecture 4
Vibration and Control

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Goals:

- Models of mechanical systems (2DOF systems)
  - Free Body Diagram and equations of motion
  - State-space representation (note: multiple choices of states are possible)
  - Input/output representation: transfer function

- Example 1: Vertical oscillation of a spring-mass-damper system

- Example 2: Inverted pendulum on a cart
  - Multibody systems connected with pin joints