



# MEEG 311 - Lecture 3

## Vibration and Control

**Ioannis Poulakakis**

**4 September 2018**

### **Goals:**

- Review of basic properties of Laplace transformations
  - Definition
  - Linearity, differentiation, integration
- Application of Laplace transformation to ODEs with inputs
  - Again, the case of harmonic oscillator
- Input/output representation of systems: Transfer functions
  - Transfer function: The Laplace transformation of the output over the Laplace transformation of the input under zero initial conditions.