

Duke University  
Department of Physics

Physics 271

Spring Term 2017

## HOMEWORK 4

**Available: February 2**

**Due: February 9, in Andrew Seredinski's mailbox before class.**

**Reading:** Eggleston 2.4-2.6

Calculate  $I(t)$  and  $V(t)$  for an  $RL$  circuit by the method shown in class (set up a differential equation using Kirchoff's Loop rule and solve it). What is the mechanical analogy for this system?

**Text Problems:**

Eggleston 2.6, 2.7, 2.7, 2.9, 2.11, 2.12