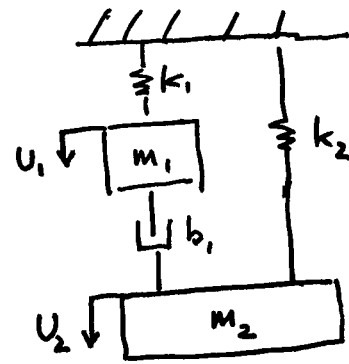


1. Consider the mechanical system:

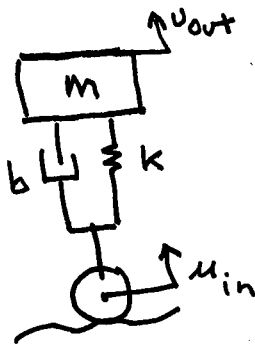
(a) Determine the electromechanical analogue using U_1, U_2 velocities as the across variable and the forces as the through variable.



(b) Express the governing eqns (ODE)

(c) Find U_2/U_1

2. Consider

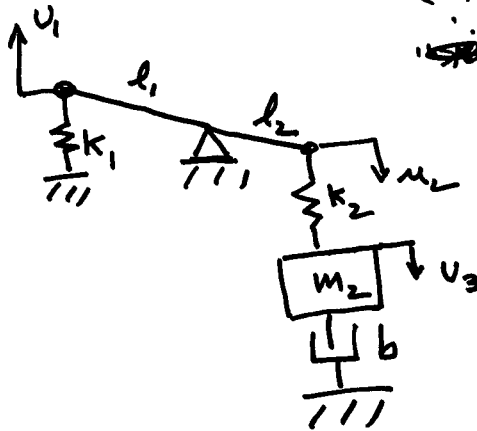


(a) Determine the electromechanical model

(b) Determine the ODEs

(c) Find $U_{out}(s)/U_{in}(s)$

3. Consider



(a) Determine the electrical ~~is~~ model

(b) Determine the ODEs