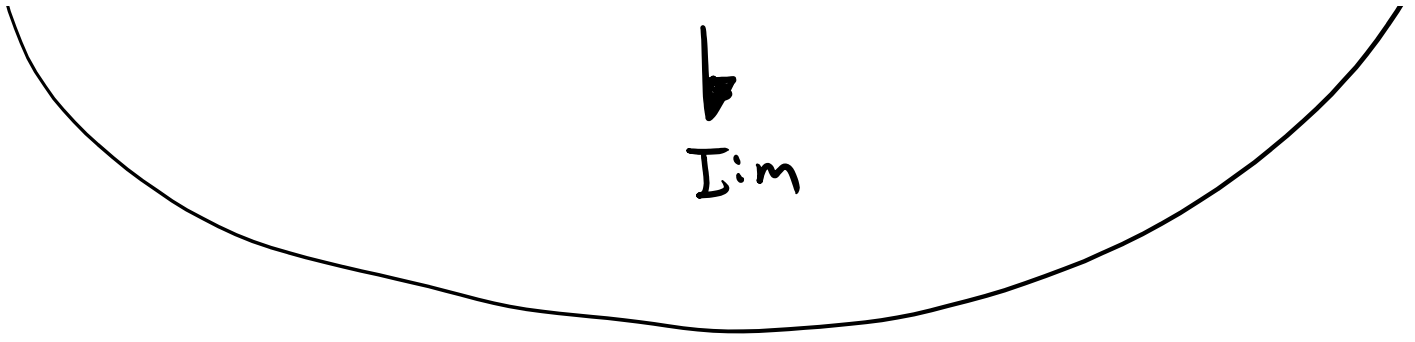
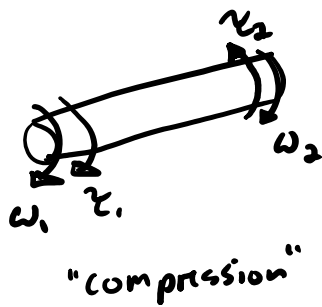
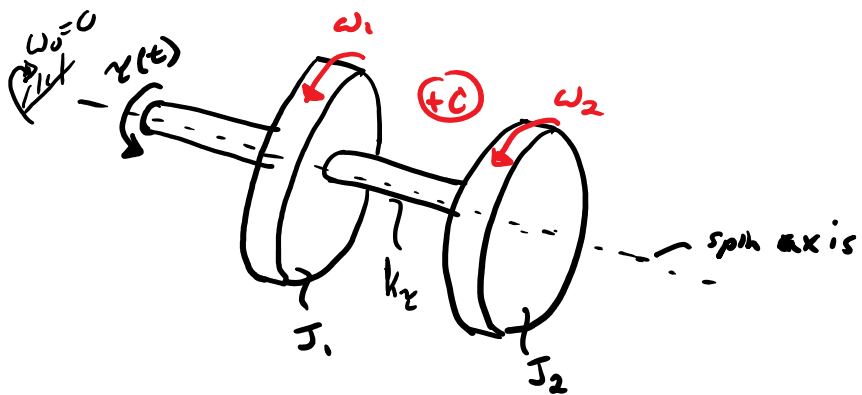


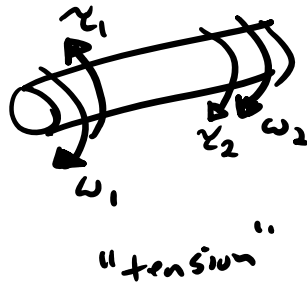
- Lab 2: due Friday
 - Midterm review: last half Thursday
- Midterm, Tuesday Feb 11
 - 80 mins.
 - Chapters 1-4.2.2
 - HW 1-5 (HW 5 due Sunday)
 - Lab 1 and 2
 - Lecture materials up through today
 - No electronic devices
 - Only have writing implement, water at desk
 - Assigned seating chart
 - You may have 2 pages front/back cheat sheets.
Contents must be written or typed by yourself.
- Use bathroom before!



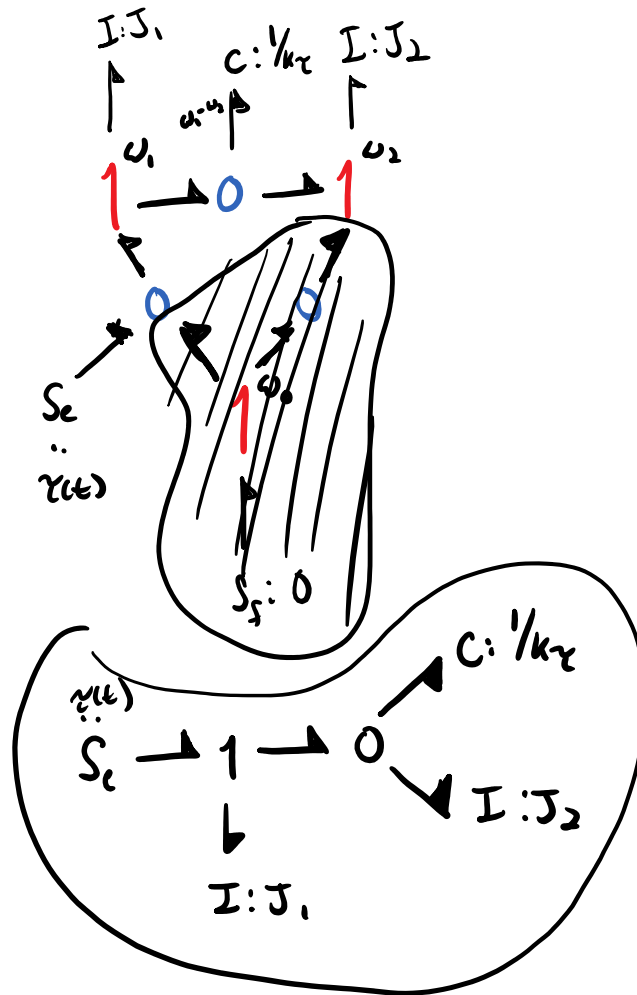
Example



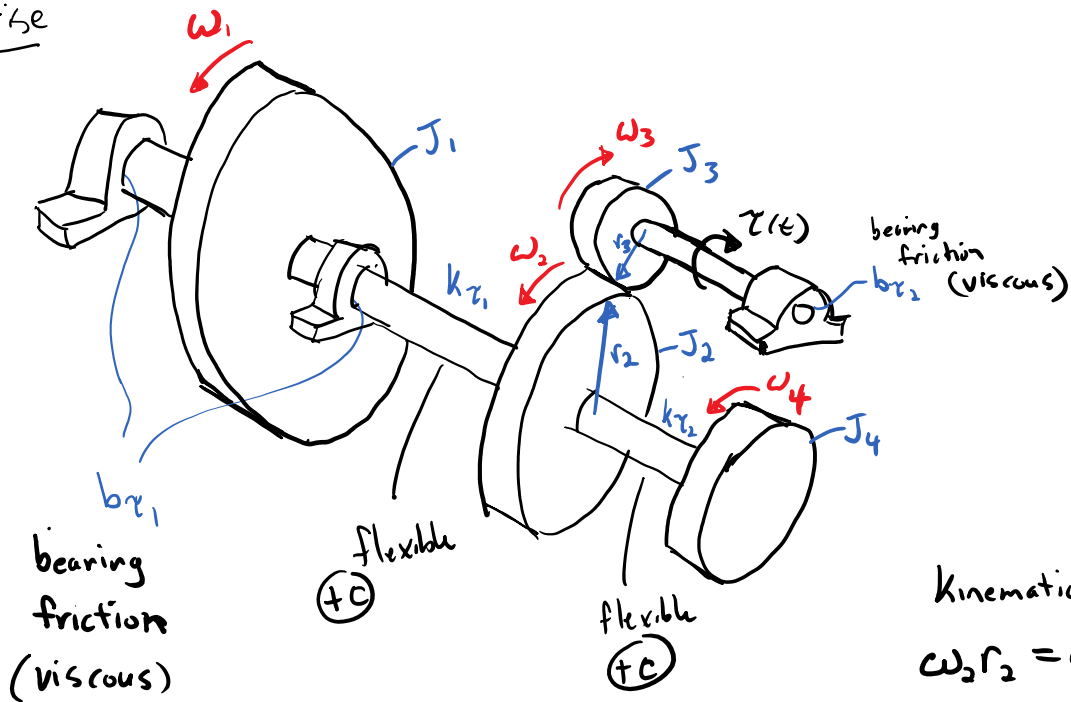
$$\omega_{rel} = \omega_1 - \omega_2$$



$$\omega_{rel} = \omega_2 - \omega_1$$



Exercise

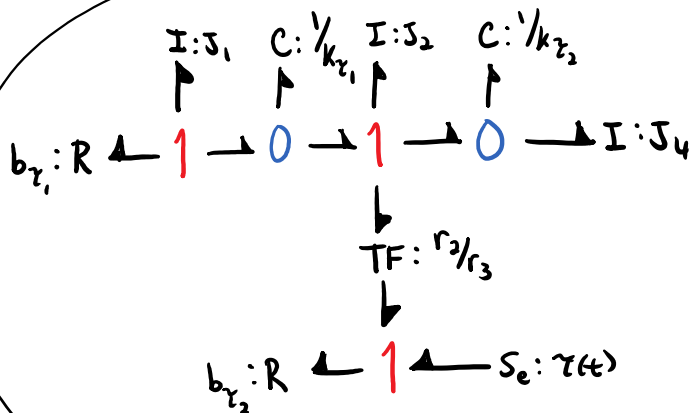
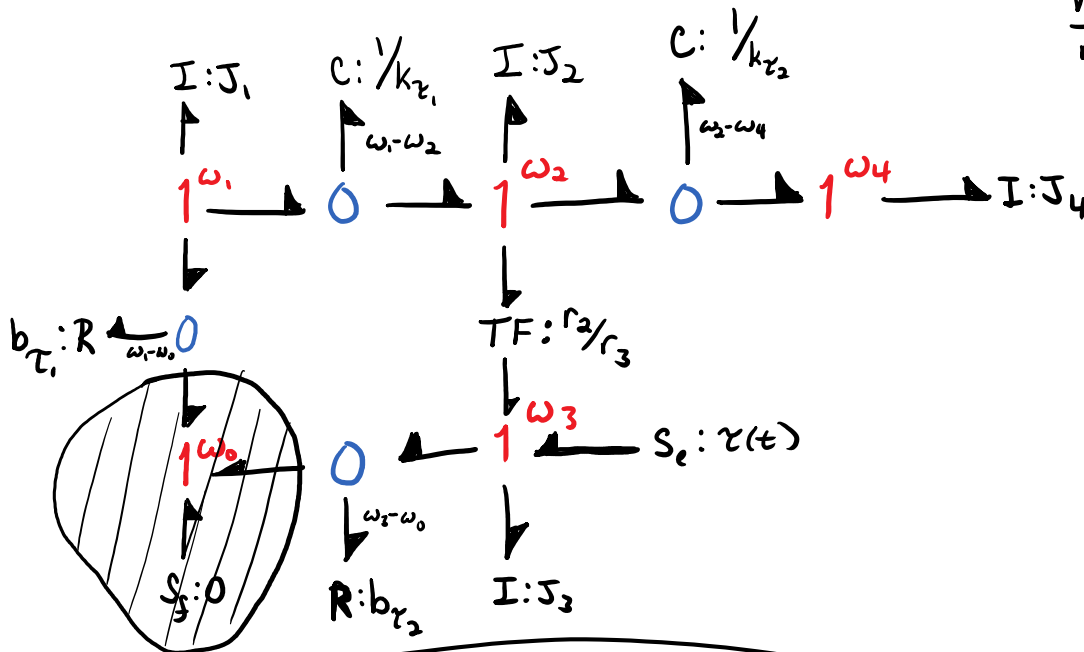


$$\underbrace{b_{\tau_1} \omega_1}_{\text{torque due to bearing friction}}$$

Kinematic relationships

$$\omega_2 r_2 = \omega_3 r_3$$

$$\frac{r_2}{r_3} \omega_2 = \omega_3$$



$$\begin{array}{ccc}
 b_{\gamma_2}: \mathbb{R} & \xleftarrow{\quad} & \overset{\cdot}{1} \xleftarrow{\quad} S_e: \gamma(t) \\
 & \downarrow & \\
 & \mathbb{I}: \mathbb{S}_2 &
 \end{array}$$