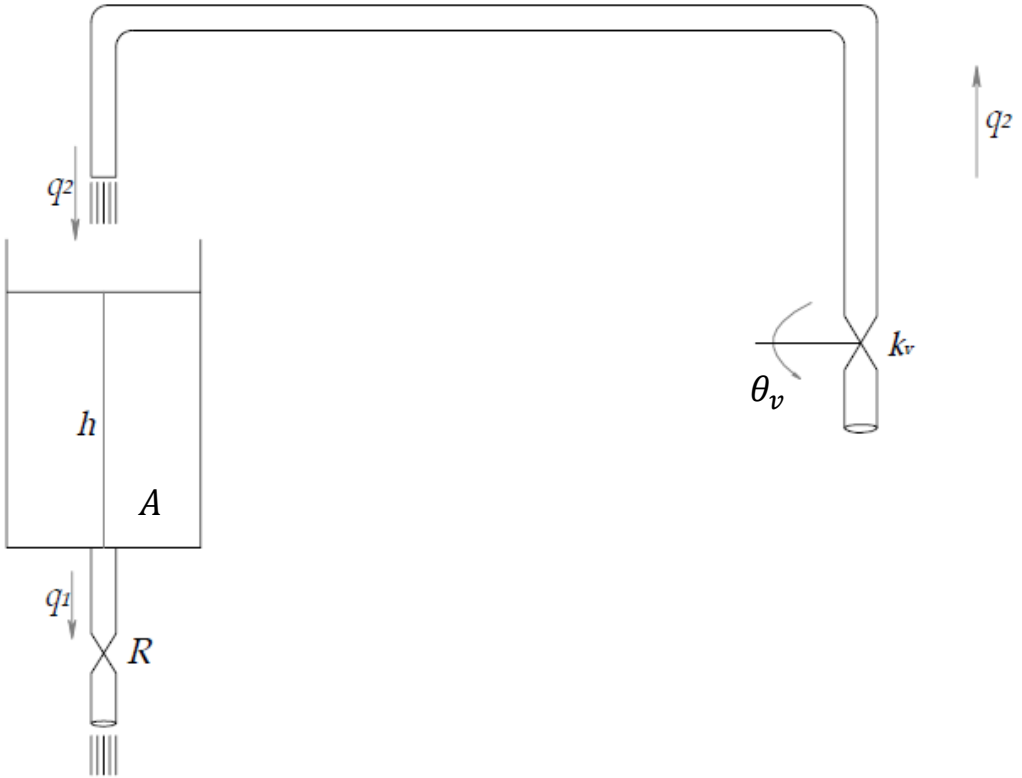
Tank Control

Mathematical Modeling

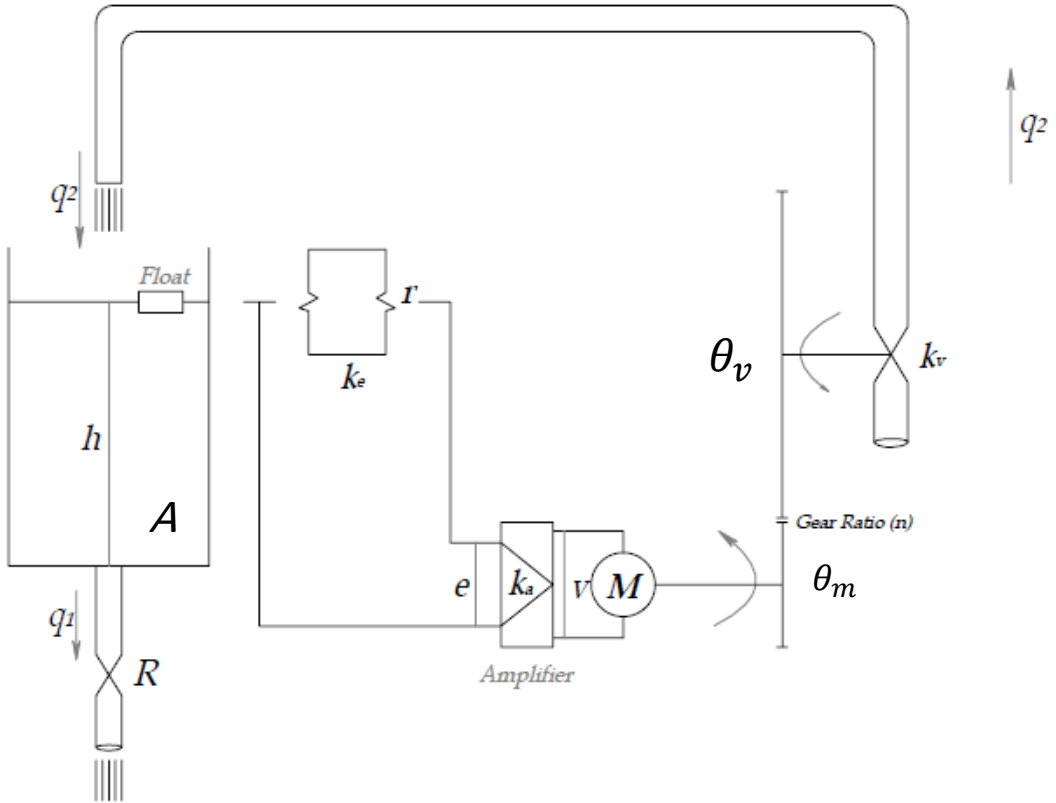


$$q_2 = k_v \theta_v{}^\circ \rightarrow 1$$

$$q_2 - q_1 = Ah^\circ \rightarrow 2$$

$$q_1 R = h \rightarrow 3$$

Proportional Controller



$$q_2 = k_v \theta_v^\circ$$
$$q_2 - q_1 = Ah^\circ$$
$$q_1 R = h$$
$$(r - h)k_e = e$$
$$v = k_a e$$
$$\theta_m^{\circ\circ} = 133v - 0.67\theta_m^\circ$$
$$\theta_v^\circ = \theta_m^\circ / n$$