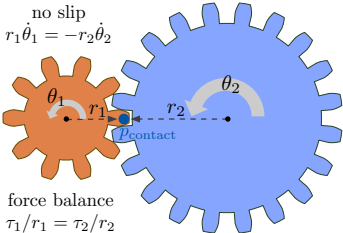


no slip

$$r_1 \dot{\theta}_1 = -r_2 \dot{\theta}_2$$



force balance

$$\tau_1 / r_1 = \tau_2 / r_2$$