

Angular momentum and impulse

Principle of angular impulse and momentum

$$\mathbf{M}_R = \Sigma \mathbf{M} = \mathbf{I} \alpha$$

$$\mathbf{M}_R = \mathbf{I} d\omega/dt$$

$$\mathbf{M}_R dt = \mathbf{I} d\omega$$

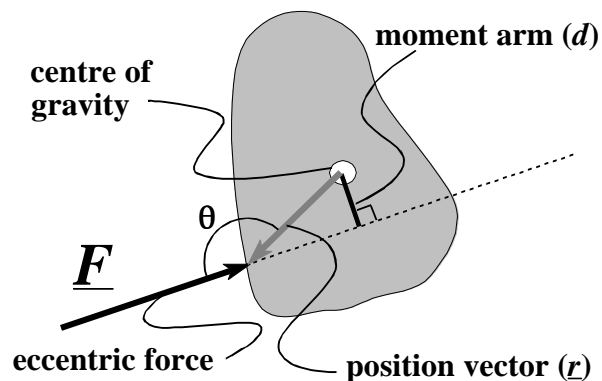
$$\int \mathbf{M}_R dt = \int \mathbf{I} d\omega = \mathbf{I} \omega_f - \mathbf{I} \omega_i$$

Angular impulse = change in angular momentum

$$\text{Angular impulse of a moment} = \int \mathbf{M}_R dt$$

$$\text{Angular momentum} = \mathbf{I} \omega$$

Graphically, angular impulse is the area under a moment history.



Examples of eccentric forces:

