## Rigid body dynamics

## Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + rac{^b d^2}{dt^2} \vec{r} + 2\vec{\omega}_{ib} imes rac{^b d}{dt} \vec{r} + \vec{\alpha}_{ib} imes \vec{r} + \vec{\omega}_{ib} imes (\vec{\omega}_{ib} imes \vec{r})$$

## Rigid body dynamics

Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + \frac{^b d^2}{dt^2} \vec{r} + 2\vec{\omega}_{ib} \times \frac{^b d}{dt} \vec{r} + \vec{\alpha}_{ib} \times \vec{r} + \vec{\omega}_{ib} \times (\vec{\omega}_{ib} \times \vec{r})$$

Transversal acceleration





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## Rigid body dynamics

Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + rac{^b d^2}{dt^2} \vec{r} + 2\vec{\omega}_{ib} imes rac{^b d}{dt} \vec{r} + \vec{\alpha}_{ib} imes \vec{r} + \vec{\omega}_{ib} imes (\vec{\omega}_{ib} imes \vec{r})$$

- Transversal acceleration
- Centripetal acceleration





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