

# Rigid body dynamics

- Coriolis acceleration

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

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- Transversal acceleration

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- Coriolis acceleration

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

- Transversal acceleration
- Centripetal acceleration