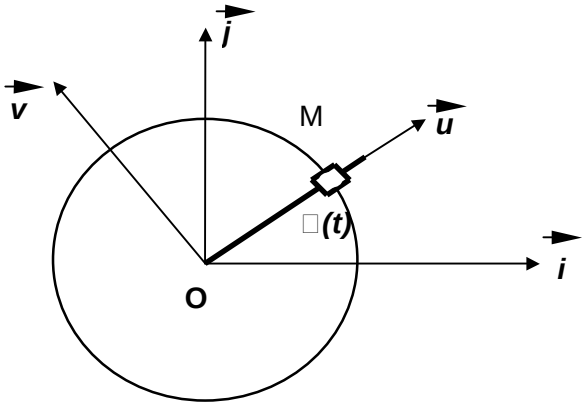
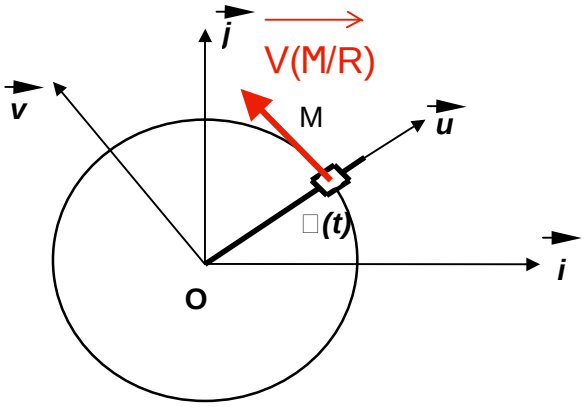
Mouvement de rotation

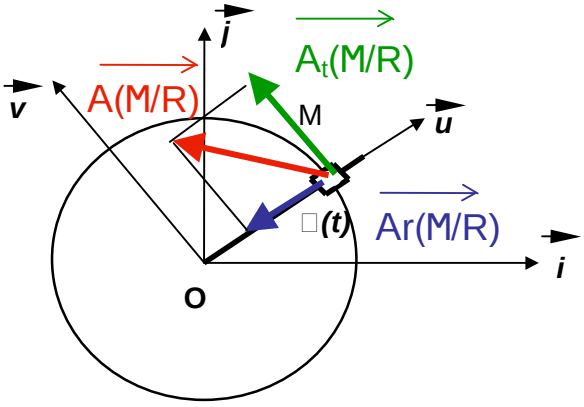


$$\overrightarrow{OM} = R \cdot \vec{u}$$



$$\overrightarrow{V_M} = R \cdot \dot{\theta} \cdot \vec{u}$$

$$\overrightarrow{V_M} = R \cdot \omega \cdot \vec{u}$$



$$\overrightarrow{A_M} = -R \cdot \dot{\theta}^2 \cdot \vec{u} + R \cdot \ddot{\theta} \cdot \vec{v}$$

$$\overrightarrow{A_M} = -R \cdot \omega^2 \cdot \vec{u} + R \cdot \alpha \cdot \vec{v}$$

Mouvement de rotation uniforme (MRU)

$$\begin{cases} \alpha(t) = \alpha_0 = 0 \quad = \ddot{\theta} = \dot{\omega} \\ \omega(t) = \omega_0 = \text{constante} \quad = \dot{\theta} = \dot{\theta}_0 \\ \theta(t) = \omega_0 . t + \theta_0 \end{cases}$$

Mouvement de rotation uniformément accéléré (MRUA)

$$\begin{cases} \alpha(t) = \alpha_0 = \text{constante} \\ \omega(t) = \alpha_0 . t + \omega_0 \\ \theta(t) = \frac{1}{2} . \alpha_0 . t^2 + \omega_0 . t + \theta_0 \end{cases}$$

$$\omega_f^2 = \omega_i^2 + 2.\alpha.(\theta_f - \theta_i)$$