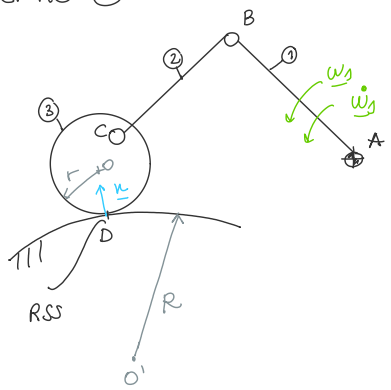
# Osservazioni: confronto RSS vs RCS

venerdì 29 novembre 2024 12:34

ESEMPIO ①




ROT in D ?

$n_{gdl} = 1 = 3\times3 - 3\times2 - X = 1$

$X = 2 \Rightarrow$ RSS in D

$\Rightarrow$ RSS – VINCOLO FISSO

$\underline{a}_{C③} = \underline{a}_{C③}$

TR $\Rightarrow \underline{a}_{C②}$ | TR $\Rightarrow$ D

$$\underline{a}_{C③} = \underline{a}_{C②} = \underline{a}_B + \dot{\underline{\omega}}_2 \wedge \vec{BC} - \omega_2^2 \vec{BC} = \dot{\underline{\omega}}_1 \wedge \vec{AB} - \omega_1^2 \vec{AB} + \dot{\underline{\omega}}_2 \wedge \vec{BC} - \omega_2^2 \vec{BC}$$

$\underline{a}_B$ ↓ $\underline{a}_{B④}$

$$\underline{a}_{C③} = \underline{a}_D + \dot{\underline{\omega}}_3 \wedge \vec{DC} - \omega_3^2 \vec{DC}$$

$\underline{a}_D$ ↓ $\underline{a}_{D③}$ $\quad D \equiv C_{V3}$

$$\underline{a}_D = -D\omega_3^2 \underline{n}$$

$$R_f = \vec{C_V O_f} \cdot \underline{n} = \vec{DO'} \cdot \underline{n} = -R$$

$$R_m = \vec{C_V O_m} \cdot \underline{n} = \vec{DO} \cdot \underline{n} = r$$

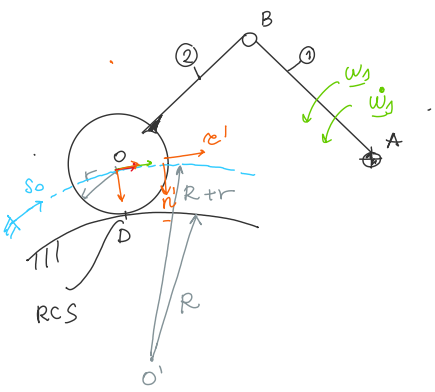
$$\frac{1}{D} = -\frac{1}{R} - \frac{1}{r} \Rightarrow D = -\frac{Rr}{R+r}$$

$$\underline{a}_D = +\frac{Rr}{R+r}\omega_3^2 \underline{n}$$

$$\dot{\underline{\omega}}_1 \wedge \vec{AB} - \omega_1^2 \vec{AB} + \dot{\underline{\omega}}_2 \wedge \vec{BC} - \omega_2^2 \vec{BC} = +\frac{Rr}{R+r}\omega_3^2 \underline{n} + \dot{\underline{\omega}}_3 \wedge \vec{DC} - \omega_3^2 \vec{DC}$$

$\dot{\underline{\omega}}_2$ ? $\qquad \dot{\underline{\omega}}_3$ ?

ESEMPIO ②




• $n°gdl = 1 = 2\times3 - 2\times2 - X$

$X = 1 \Rightarrow$ RCS

$\underline{a}_{O②} = \underline{a}_{O②}$

TR | TRASLATORIA

$$\underline{a}_B + \dot{\underline{\omega}}_2 \wedge \vec{BO} - \omega_2^2 \vec{BO} = \ddot{s}_0 \underline{t}' + \frac{\dot{s}_0^2}{\rho_0} \underline{n}'$$

$\underline{a}_B$ ↓ $\dot{\underline{\omega}}_1 \wedge \vec{AB} - \omega_1^2 \vec{AB}$

$\frac{\dot{s}_0^2}{R+r} \underline{n}'$