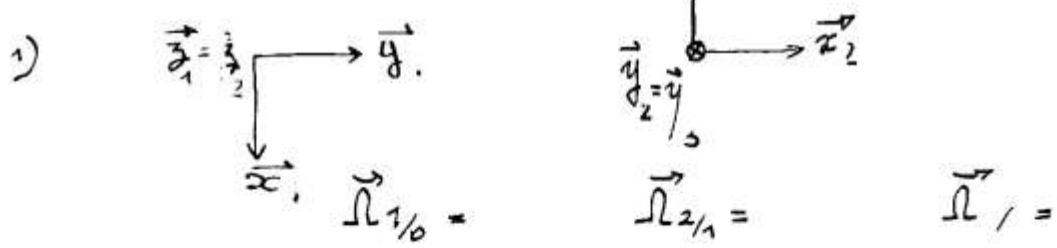


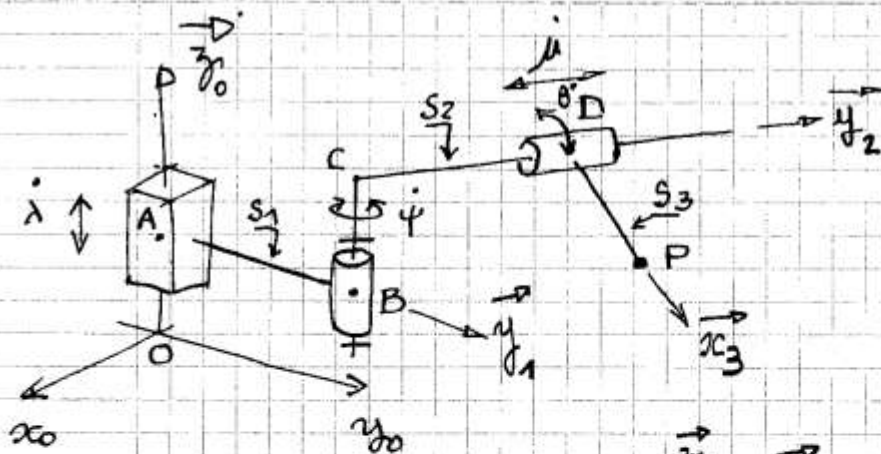
$\vec{OA} = \lambda(t) \vec{z}_0$
 $AB = a \text{ de}$
 $BC = b \text{ ''}$
 $CD = \mu(t)$
 $DP = d \text{ de}$



- 2) Vecteurs position /Ro de A, D, P
- 3) Vecteur vitesse \vec{V}_{D/R_0} , \vec{V}_{P/R_0}
- 4) Vecteur accélération $\vec{\Gamma}_{D/R_0}$.

$$\vec{V}_{D/R_0} = \dot{\lambda} \vec{z}_0 + \dot{\psi} \vec{y}_1 - \mu \dot{\psi} x_2 \vec{z}_2 + \dot{\mu} \vec{y}_2 + \mu \dot{\psi} x_2 \vec{z}_2 + d \dot{\theta} \vec{z}_3$$

$$\vec{\Gamma}_{D/R_0} = \ddot{\lambda} \vec{z}_0 - 2 \dot{\mu} \dot{\psi} x_2 \vec{z}_2 - \mu \ddot{\psi} x_2 \vec{z}_2 + \ddot{\mu} \vec{y}_2 + \mu \ddot{\psi} x_2 \vec{z}_2 + d \ddot{\theta} \vec{z}_3$$



1) $\vec{z}_0 = \vec{z}_2$

$\vec{\Omega}_{1/0} = \dot{\lambda} \vec{z}_0$ $\vec{\Omega}_{2/1} = \dot{\psi} \vec{z}_1$ $\vec{\Omega}_{3/2} = \dot{\theta} \vec{y}_2$

2) Vecteurs position / R_0 de A, D, P

$\vec{OA} = \lambda \vec{z}_0$

$\vec{AP} = \vec{AD} + d \vec{x}_3$ $\vec{AD} = \lambda \vec{z}_0 + a \vec{y}_1 + b \vec{z}_0 + \mu \vec{y}_2$

3) Vecteur vitesse \vec{V}_{D/R_0} , \vec{V}_{P/R_0}

4) Vecteur accélération $\vec{\Gamma}_{D/R_0}$

$\vec{V}_{D/R_0} = \dot{\lambda} \vec{z}_0 + a(\dot{\theta} \wedge \vec{y}_1) + 0 + \dot{\mu} \vec{y}_2 + \mu(\dot{\psi} \vec{z}_1 \wedge \vec{y}_2)$

$\vec{V}_{D/R_0} = \dot{\lambda} \vec{z}_0 + \dot{\mu} \vec{y}_2 - \mu \dot{\psi} \vec{x}_2$

$\vec{V}_{P/R_0} = \dot{\lambda} \vec{z}_0 + \dot{\mu} \vec{y}_2 - \mu \dot{\psi} \vec{x}_2 + d(\dot{\psi} \vec{z}_1 + \dot{\theta} \vec{y}_2) \wedge \vec{x}_3$

$\vec{V}_{P/R_0} = \dot{\lambda} \vec{z}_0 + \dot{\mu} \vec{y}_2 - \mu \dot{\psi} \vec{x}_2 + d \dot{\psi} \cos \theta \vec{y}_2 - d \dot{\theta} \vec{z}_3$

$\vec{\Gamma}_{D/R_0} = \ddot{\lambda} \vec{z}_0 + \ddot{\mu} \vec{y}_2 - \ddot{\mu} \dot{\psi} \vec{x}_2 - \dot{\mu} \dot{\psi} \vec{x}_2 - \mu \ddot{\psi} \vec{x}_2 - \mu \dot{\psi}^2 \vec{y}_2$