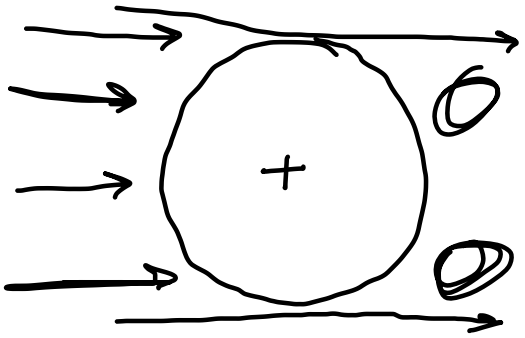
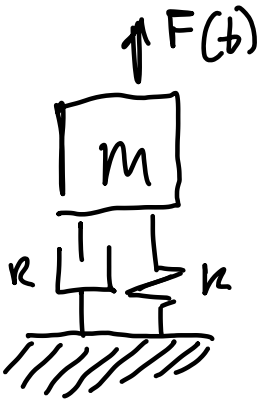
Esercitazione 8 -

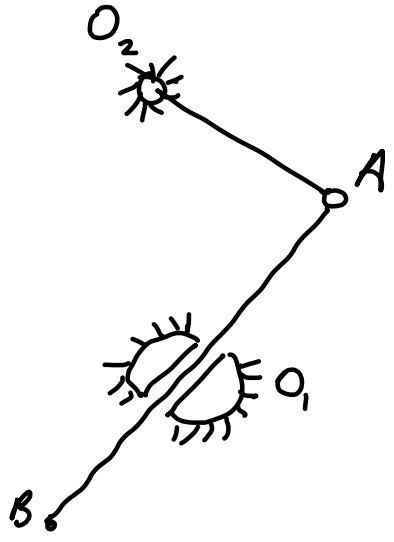
Per misurare vibrazione è più facile usare accelerometro

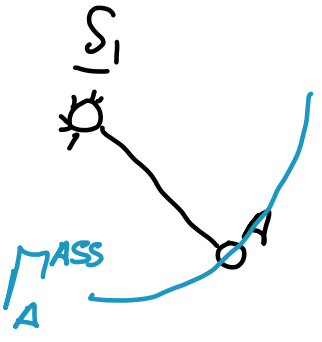


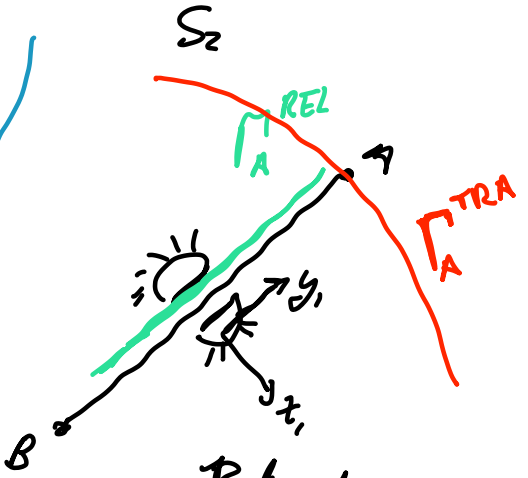
Nei sistemi meccanici ci sono sistemi vibrazionali molto difficili da studiare



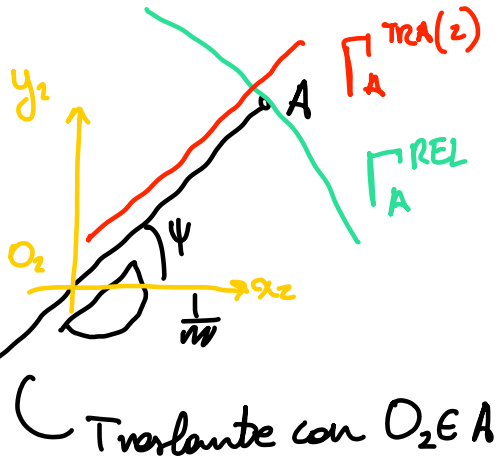
Esercizio ultimo molto







Rotante Insieme

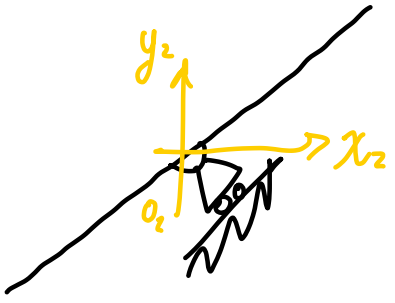


Asta, sulla cerniera, non su asta

↳ Traslante con O_2 E ASTA

↳ Per la velocità cambiano, per le accelerazioni invece no, in questo caso nonché coriolis

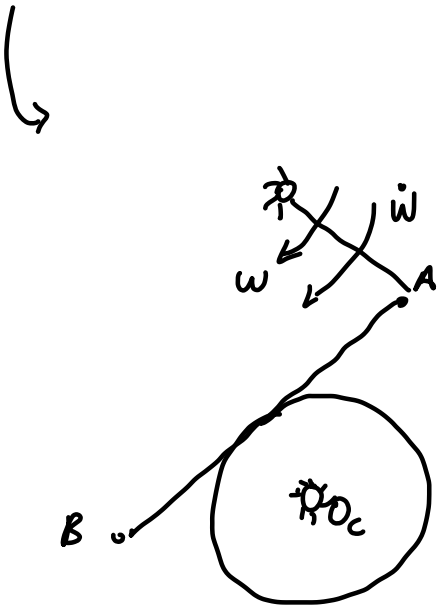
↳ questo non descrive il vincolo della cerniera a terra, ma di un carrello su piano

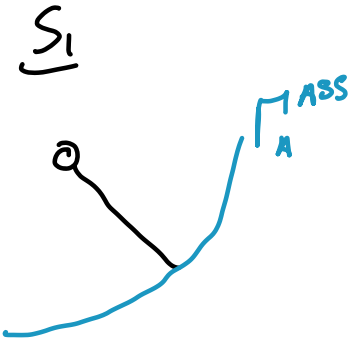


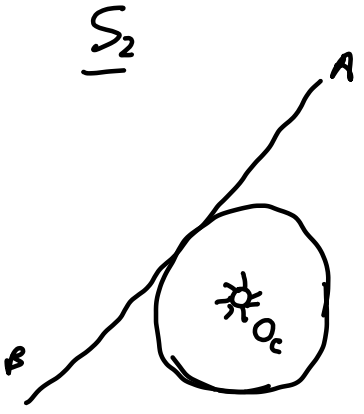
Sono molto simili, ma sono diversi. Infatti la accelerazione è diversa, non c'è coriolis

Il traslatorio è come l'unione il nostro vincolo, il modo che si muove muoversi, questi due hanno risultati simili ma diversi.

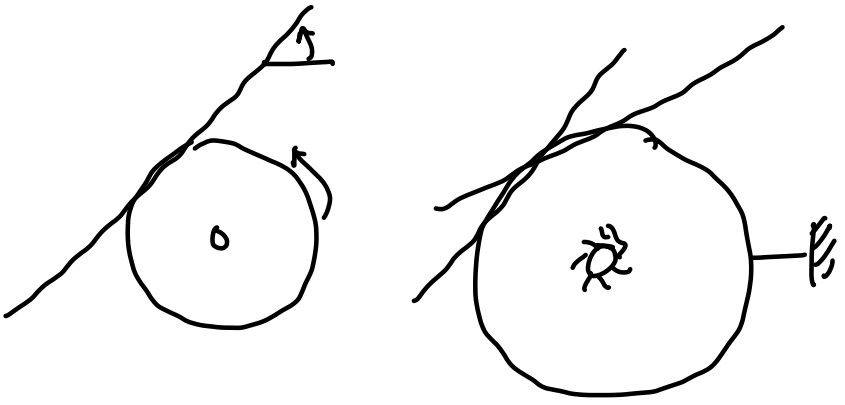
Problema simile



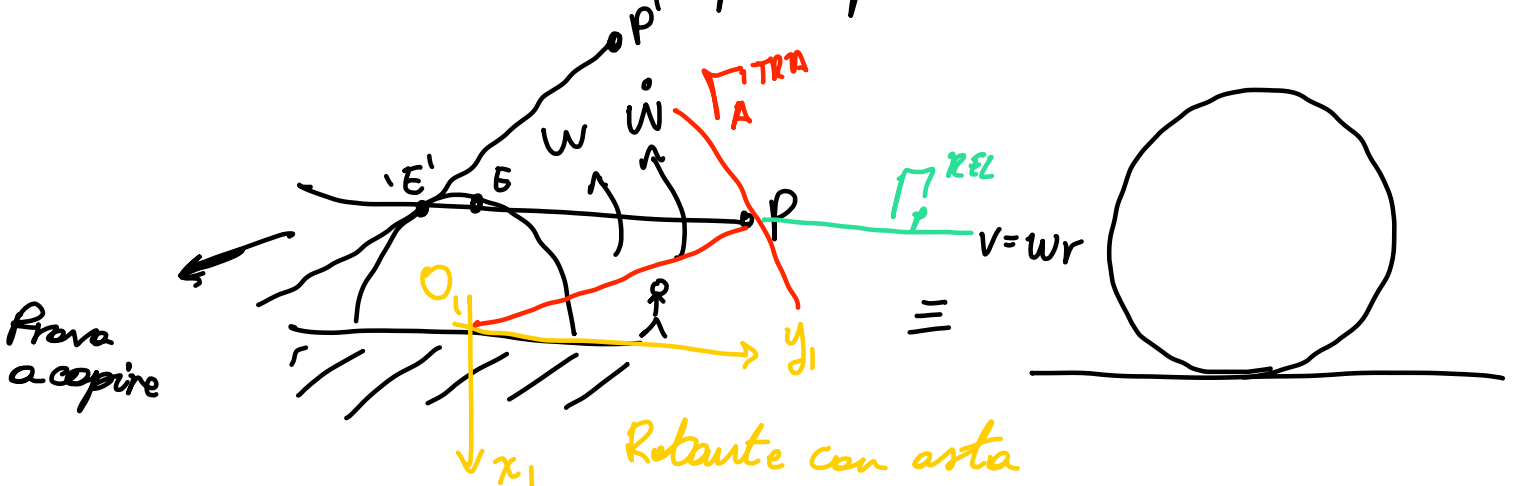




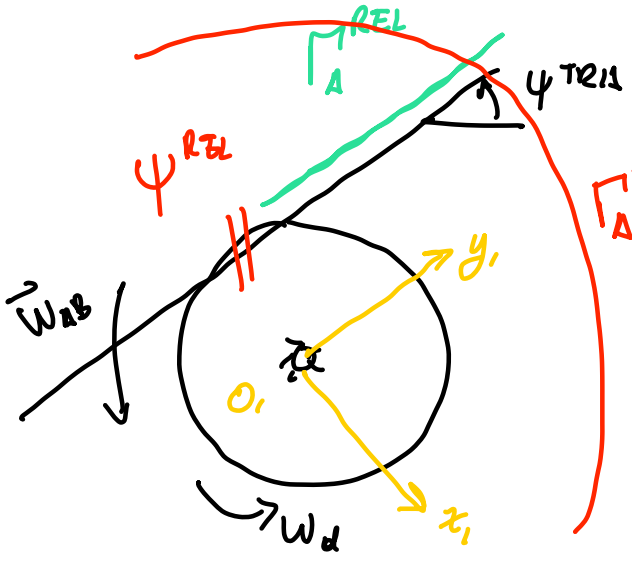
Pensiamo
rotante
con dischi



Uno altro problema per capire



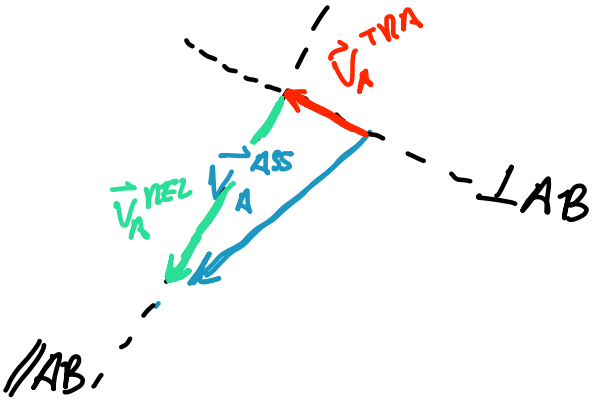
È un molto complicato, allora bisogna seguire asta



con $R = \overline{AO_1}$

O_1, x_1, y_1 con sullacentro solidale ad asta con $\vec{\omega}_{rif} = \vec{\omega}_{AB}$

	V_A^{ASS}	V_A^{REL}	V_A^{TRA}
M	$\omega O_2 A$	?	?
D	$\perp O_2 A$	$\parallel AB$	$\perp OA$

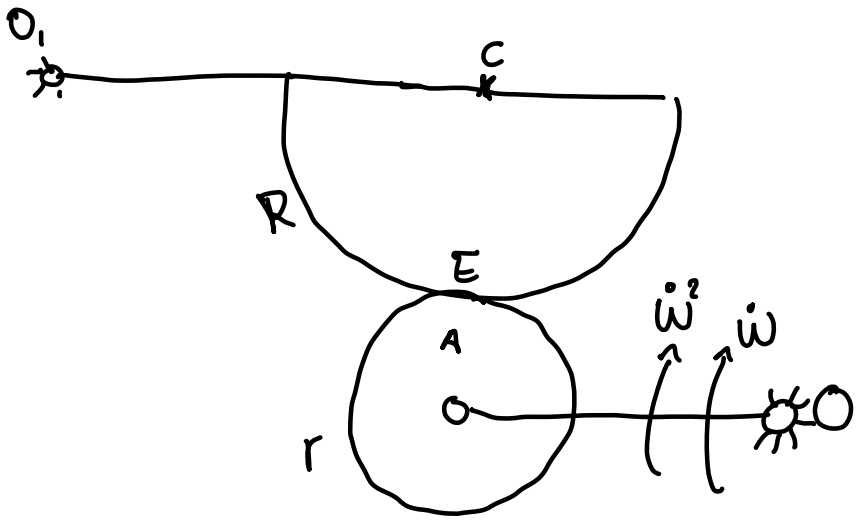


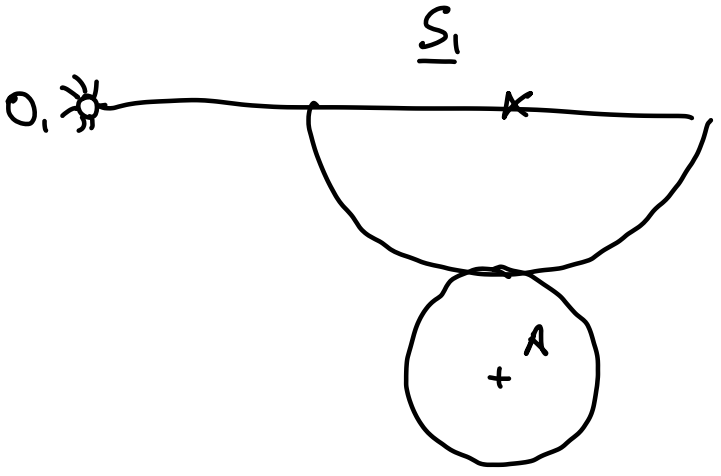
$$|\vec{\omega}_{AB}| = \frac{|\vec{V}_A^{TRA}|}{O_1 A}$$

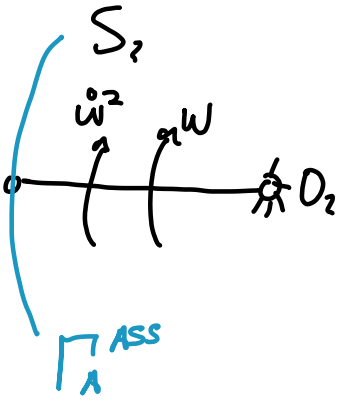
$$|\vec{\omega}_d^{REL}| = \frac{|\vec{V}_A^{REL}|}{r}$$

$\vec{\omega}_d^{REL}$ perché la abbiamo trovata quando $\omega_{rif} = 0$

Esercizio da Giovedì:

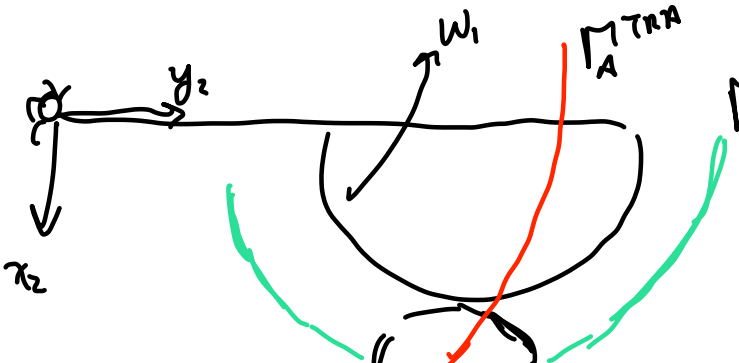






Diverse opzioni

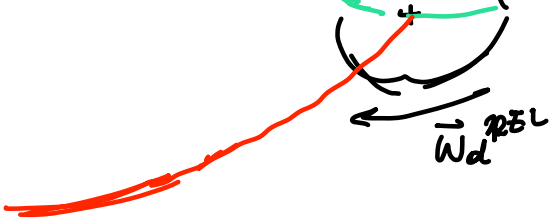
Sistema in O_1 rotante solido



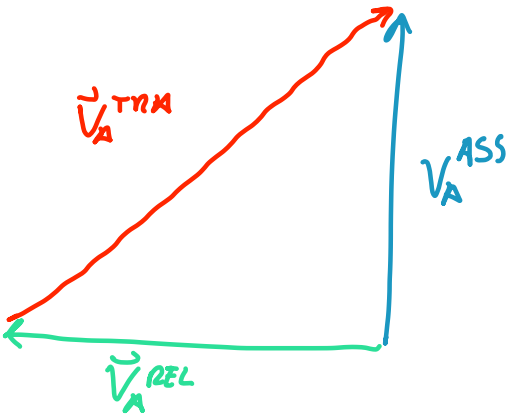
$\vec{V}_A^{ASS} = \vec{V}_A^{REL} + \vec{V}_A^{TRA}$

M $\omega_2 O_2 A$? ?

D $\perp O_2A$ $\perp CA$ $\perp O_1A$



$$\vec{w}_1 = \frac{|\vec{V}_A^{TRA}|}{0,1\ A} = w_1^{ASS}$$



Se $E \equiv CIR$

$$\Rightarrow w_d^{REL} = \frac{|\vec{V}_A^{REL}|}{r}$$

Anche con strisciamento la relativa non cambia, ma $\vec{w}_d^{ASS}$ diminuisce, perché non riesce a ruotarsi, non è più effetto di $\vec{V}_A^{REL}$