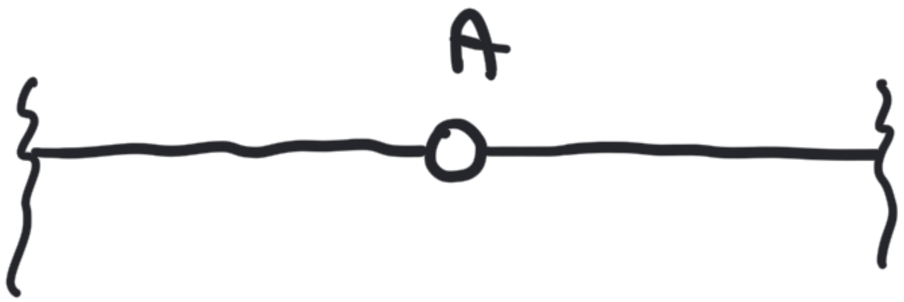
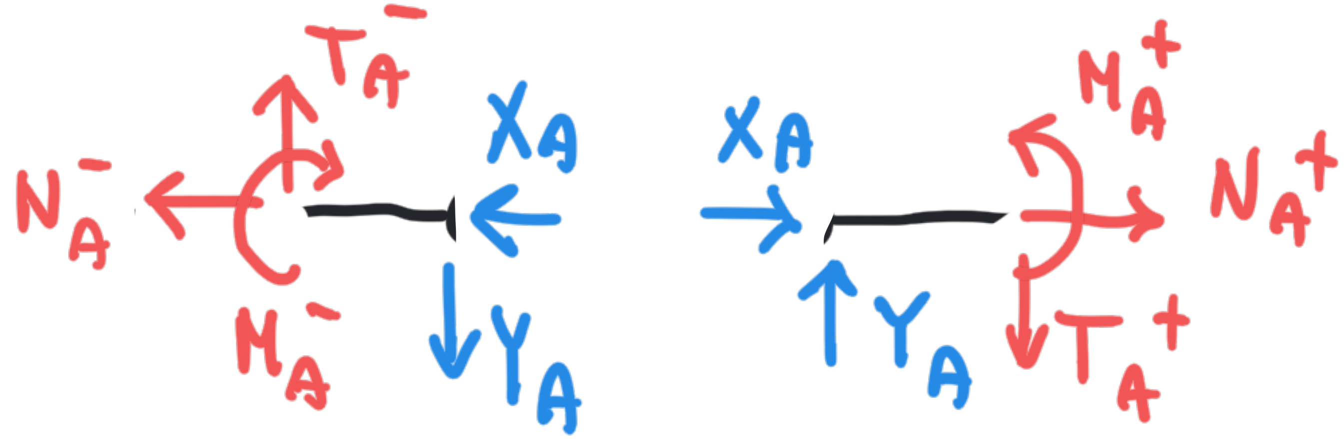




$$\left.\begin{array}{l} M_A^+ = 0 \\ M_A^- = 0 \end{array}\right\} \text{estremi}$$

$$\left.\begin{array}{l} N_A^+ - N_A^- = 0 \\ T_A^+ - T_A^- = 0 \end{array}\right\} \text{salto/raccordo}$$

$M_A^- = 0$

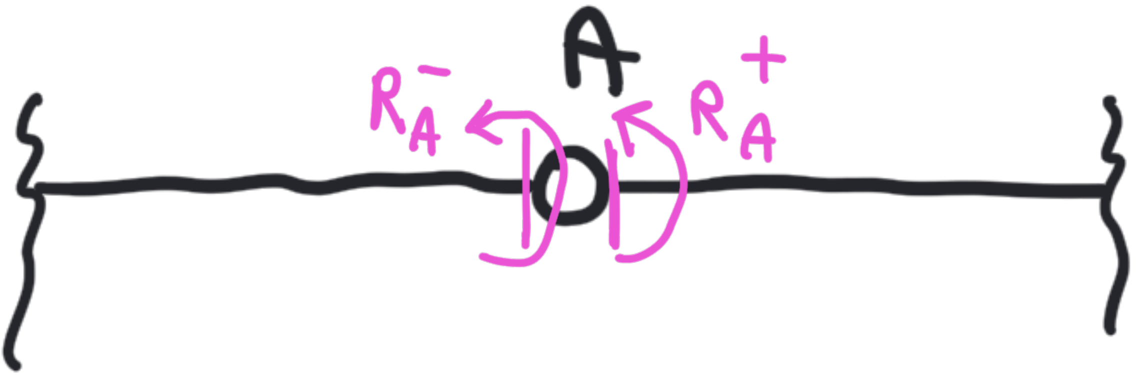
$N_A^- = -X_A$

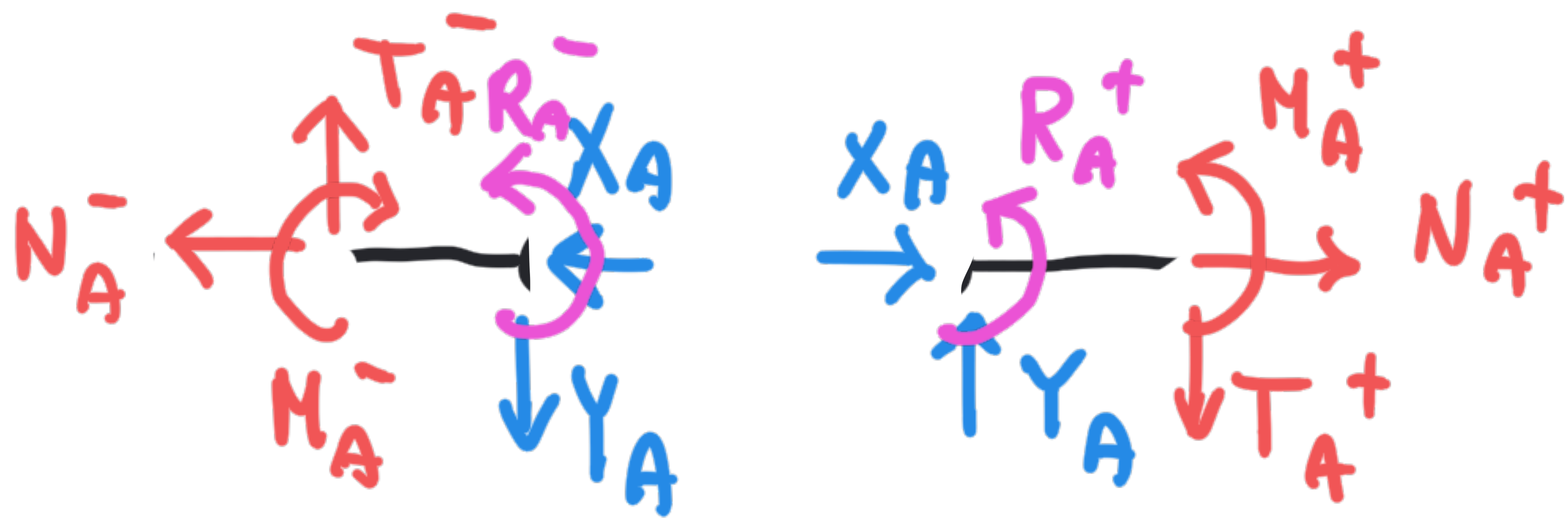
$T_A^- = Y_A$

$M_A^+ = 0$

$N_A^+ = -X_A$

$T_A^+ = Y_A$





$$\left.\begin{array}{l} M_A^+ = -R_A^+ \\ M_A^- = R_A^- \end{array}\right\} \text{estremi}$$

$$\left.\begin{array}{l} N_A^+ - N_A^- = 0 \\ T_A^+ - T_A^- = 0 \end{array}\right\} \text{salto/raccordo}$$

$$M_A^- = R_A^-$$

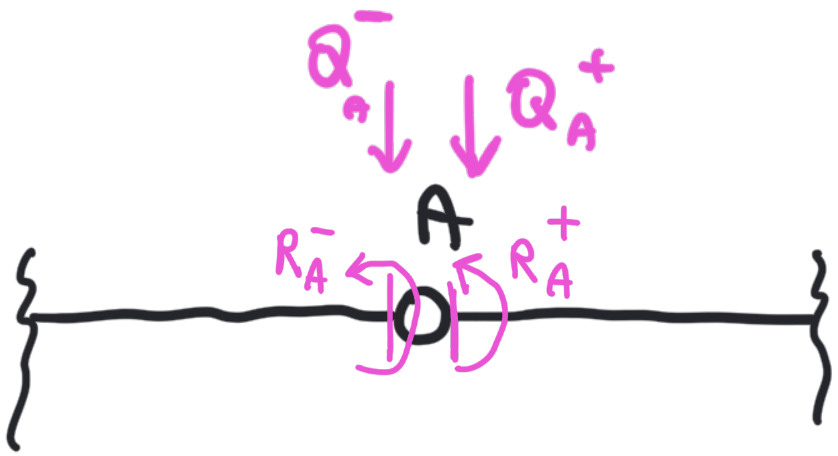
$$N_A^- = -X_A$$

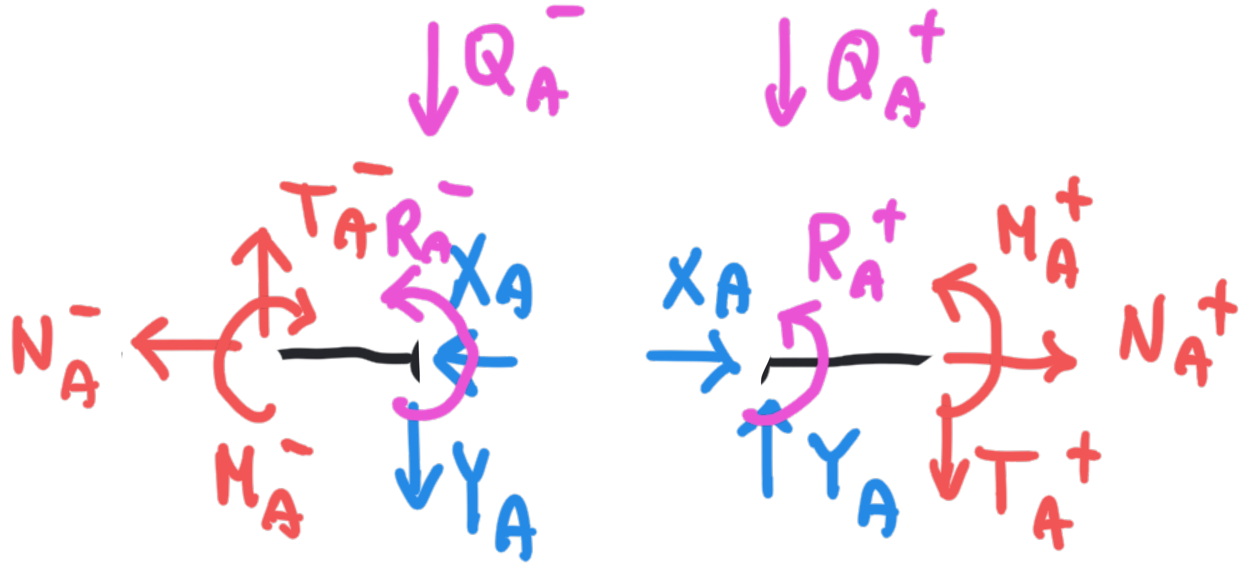
$$T_A^- = Y_A$$

$$M_A^+ = -R_A^+$$

$$N_A^+ = -X_A$$

$$T_A^+ = Y_A$$





$$\left.\begin{aligned} M_A^+ &= -R_A^+ \\ M_A^- &= R_A^- \end{aligned}\right\} \text{estremi}$$

$$\left.\begin{aligned} N_A^+ - N_A^- &= 0 \\ T_A^+ - T_A^- + Q_A^+ + Q_A^- &= 0 \end{aligned}\right\} \text{salto/raccordo}$$

$$M_A^- = R_A^-$$

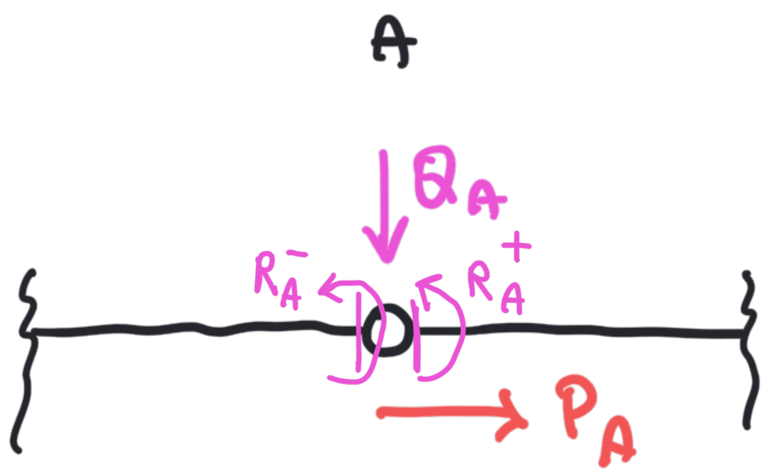
$$N_A^- = -X_A$$

$$T_A^- = Y_A + Q_A^-$$

$$M_A^+ = -R_A^+$$

$$N_A^+ = -X_A$$

$$T_A^+ = Y_A - Q_A^+$$



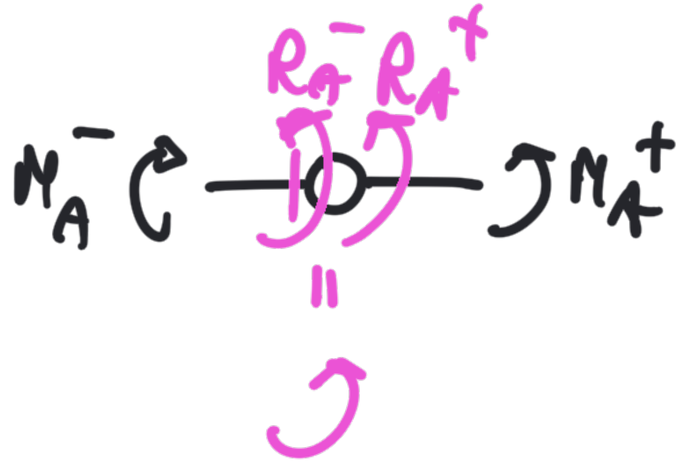
$$\left.\begin{array}{l} M_A^+ = -R_A^+ \\ M_A^- = R_A^- \end{array}\right\} \text{estremi} \quad (*)$$

$$\left.\begin{array}{l} N_A^+ - N_A^- + P_A = 0 \\ T_A^+ - T_A^- + Q_A = 0 \end{array}\right\} \text{salto/raccordo}$$

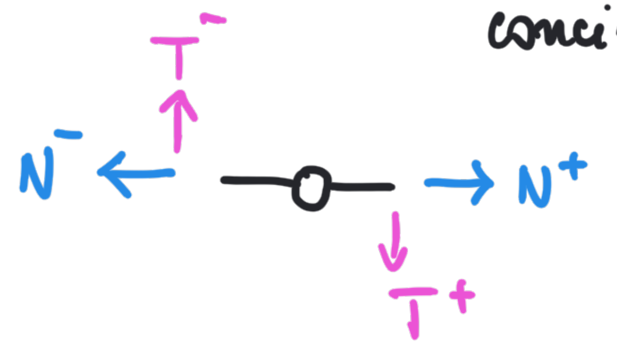
$$Q_A = Q_A^+ + Q_A^-$$

OSS:

$$(*) \Rightarrow M_A^+ - M_A^- + R_A^+ + R_A^- = 0$$



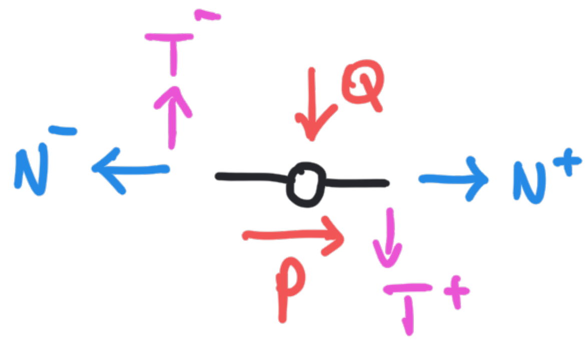
$$R_A = R_A^+ + R_A^-$$



concio "virtuale"

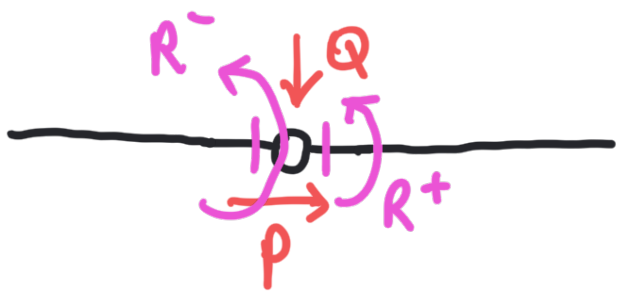
$M^+ = 0$

$M^- = 0$

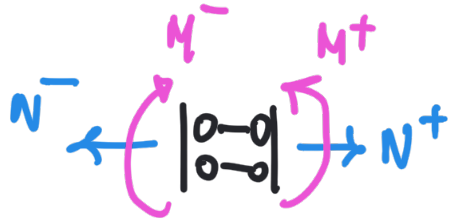


$$N^+ - N^- + P = 0$$

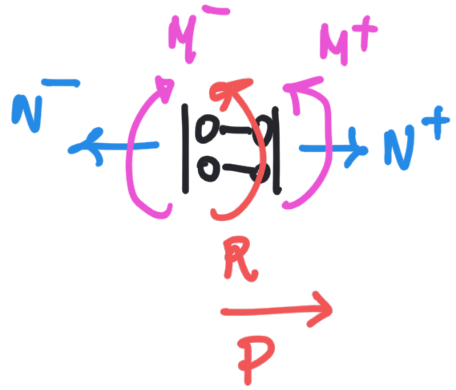
$$T^+ - T^- + Q = 0$$



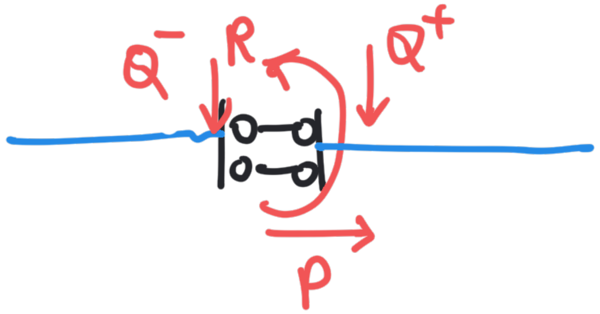
Il concio
può sostenere P e Q
Una eventuale coppia
va ripartita tra
le travi che concorrono
in A.



concio virtuale

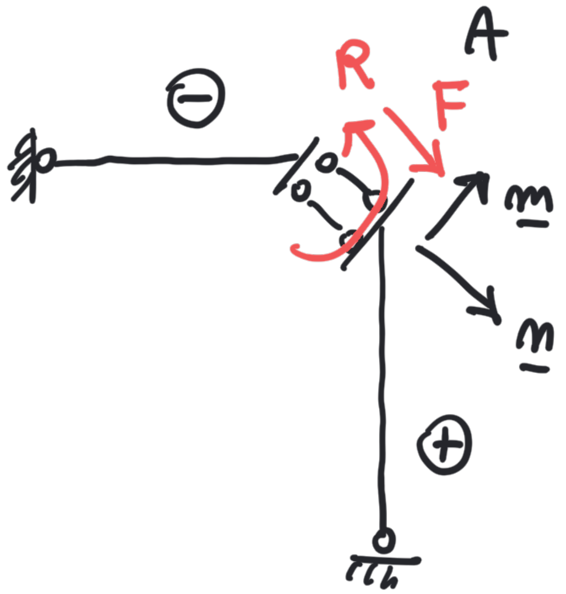


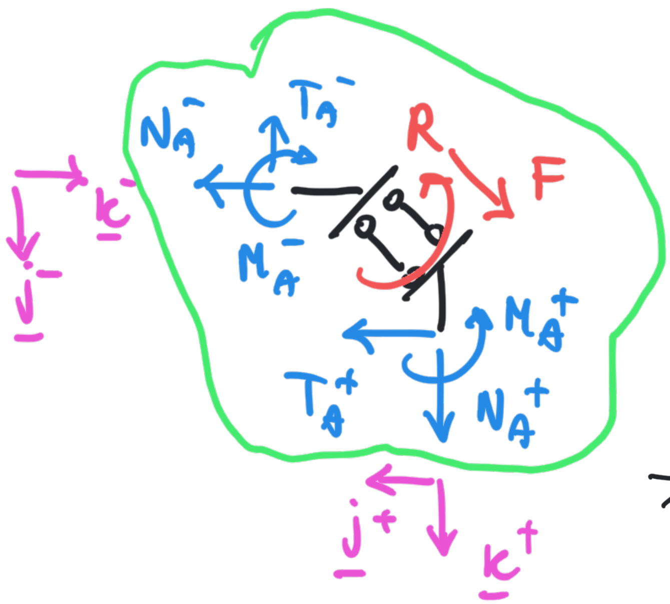
$N^+ - N^- + P = 0$
$M^+ - M^- + R = 0$

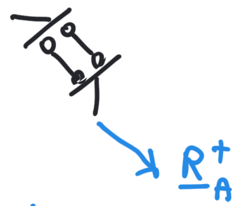


Il "concio virtuale" può sostenere P e R.
Un eventuale carico trasversale Q va ripartito sulle travi che concorrono nel "conci.

$T^- = Q^-$ $\quad T^+ = -Q^+$







$$\underline{R}_A^+ \cdot \underline{m} = 0$$

$$\underline{R}_A^+ = N_A^+ \underline{k}^+ + T_A^+ \underline{j}^+$$

$$(\underline{k}^+ \cdot \underline{m}) N_A^+ + (\underline{j}^+ \cdot \underline{m}) T_A^+ = 0$$

$$-(\underline{k}^- \cdot \underline{m}) N_A^- - (\underline{j}^- \cdot \underline{m}) T_A^- = 0$$

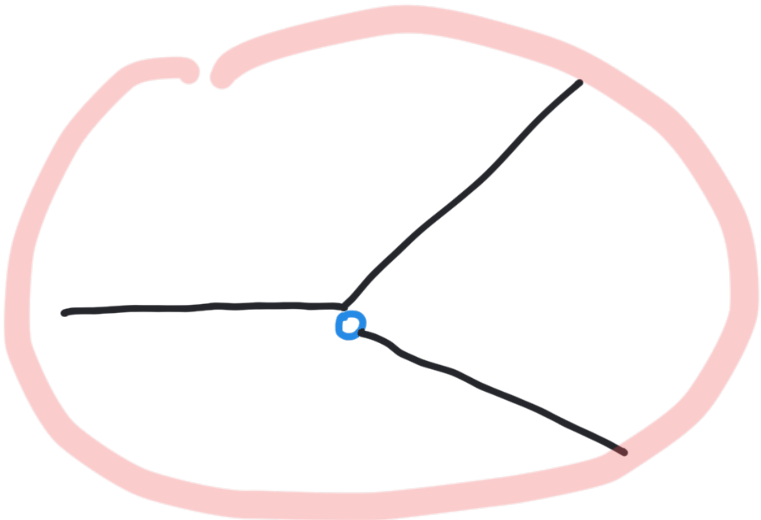
$$(\underline{k}^+ \cdot \underline{n}) N_A^+ + (\underline{j}^+ \cdot \underline{n}) T_A^+ - (\underline{k}^- \cdot \underline{n}) N_A^- - (\underline{j}^- \cdot \underline{n}) T_A^- + F = 0$$

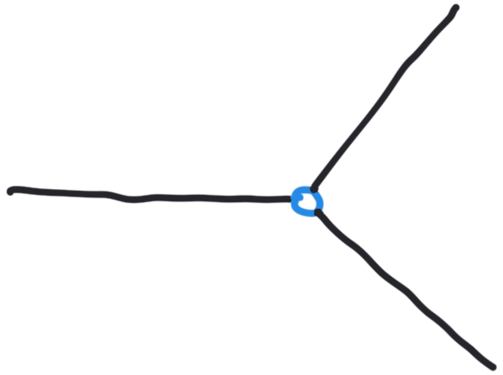
$$\left(N_A^+ \underline{k}^+ + T_A^+ \underline{j}^+ - N_A^- \underline{k}^- - T_A^- \underline{j}^- + F \underline{m}\right) \cdot \underline{n} = 0$$

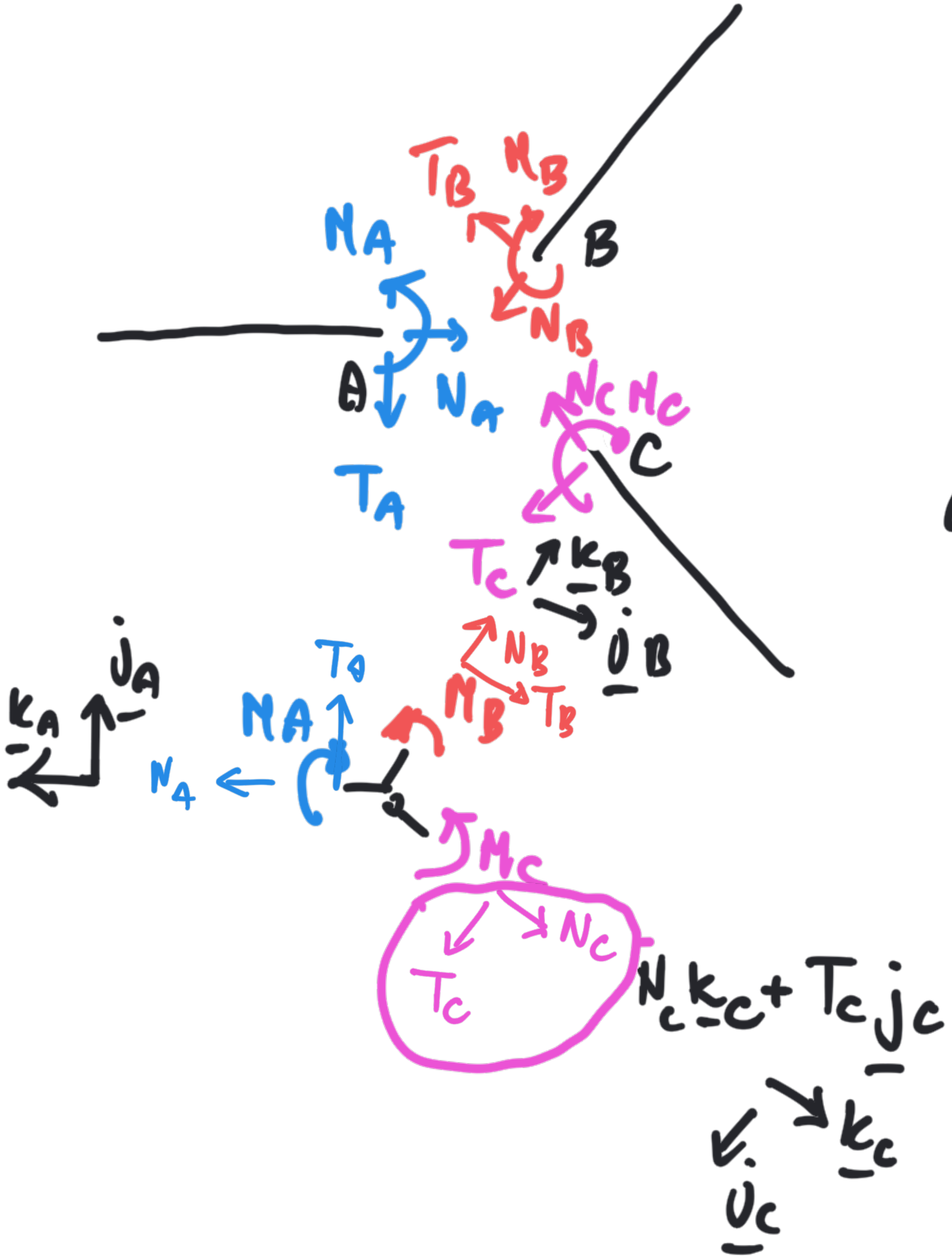
$$M_A^+ - M_A^- + R = 0$$

coefficienti.

Giunzioni multiple







$M_C = 0$

$M_B + M_C - M_A = 0$

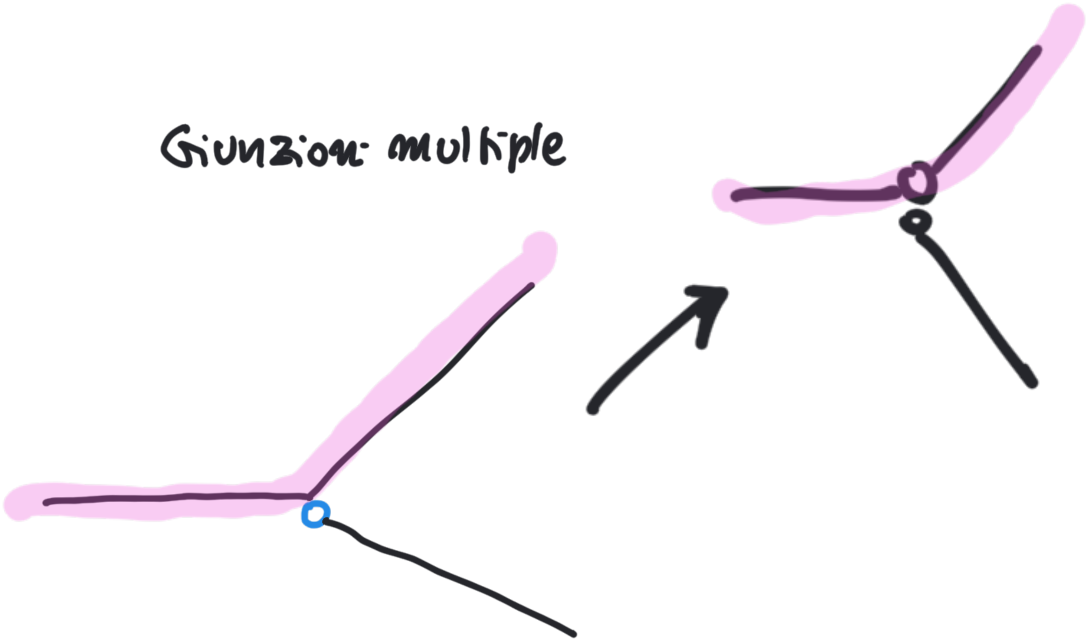
$N_B \underline{k}_B + T_B \underline{j}_B + N_C \underline{k}_C + T_C \underline{j}_C - N_A \underline{k}_A - T_A \underline{j}_A = \underline{0}$

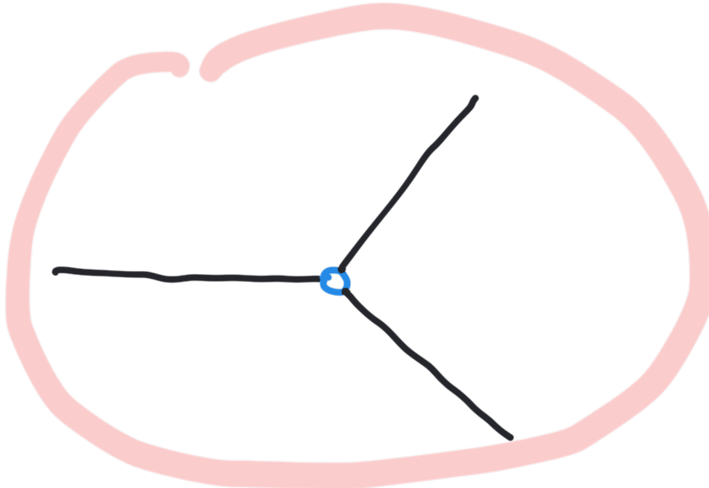
2 cond. scalari

3 condiz. equil. globale

1 condiz. aggiuntiva per ogni sconnessione "semplice"

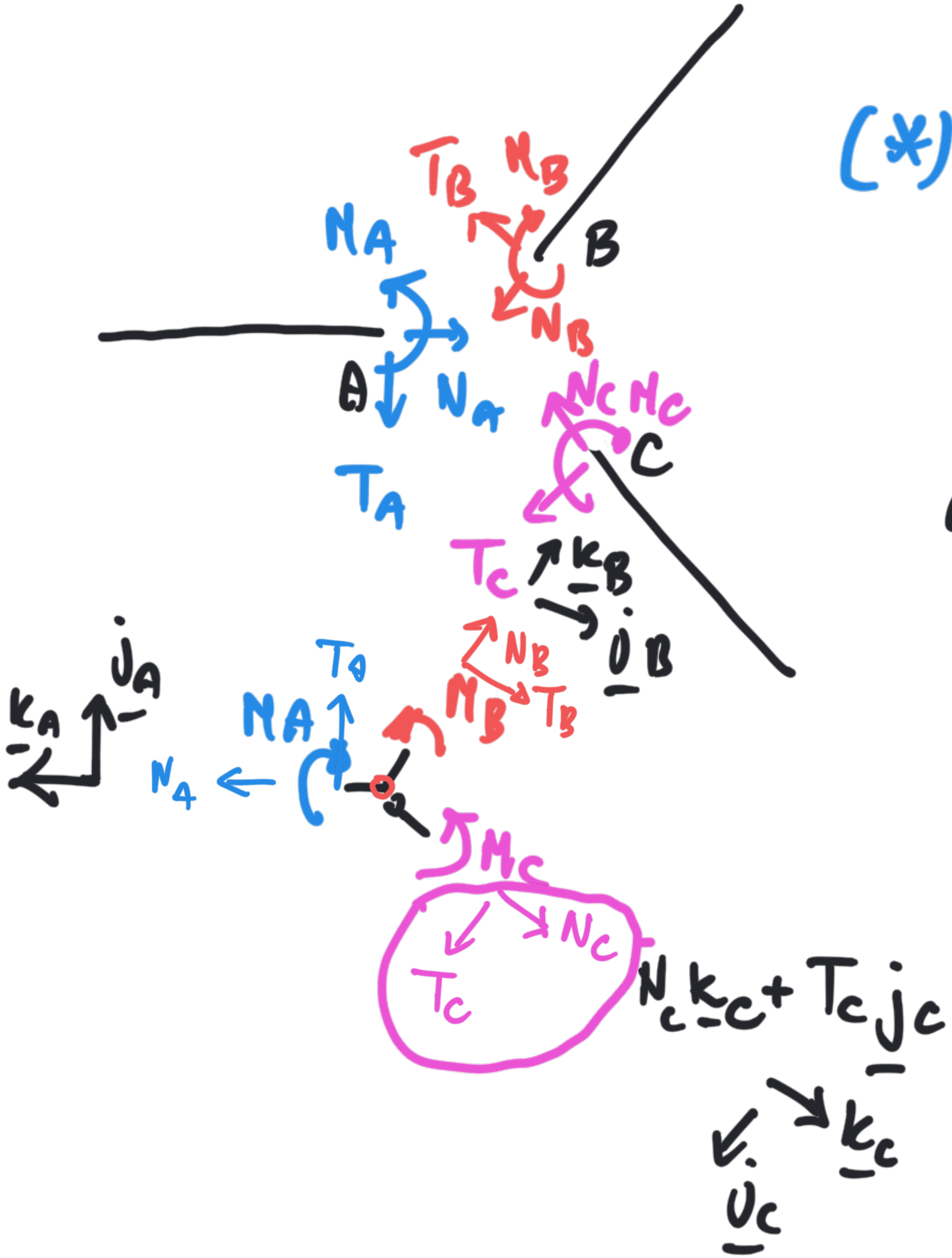
Giunzioni multiple





→ sconnessione doppia.

$(M_B = 0$ segue dalle $(*))$



$$(*) \begin{cases} M_A = 0 \\ M_C = 0 \\ M_B + M_C - M_A = 0 \end{cases}$$

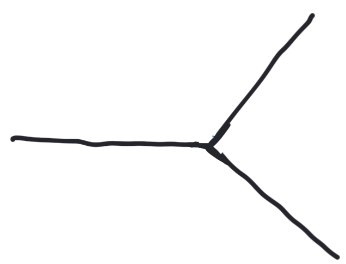
$$N_B \underline{k}_B + T_B \underline{j}_B + N_C \underline{k}_C + T_C \underline{j}_C - N_A \underline{k}_A - T_A \underline{j}_A = \underline{0}$$

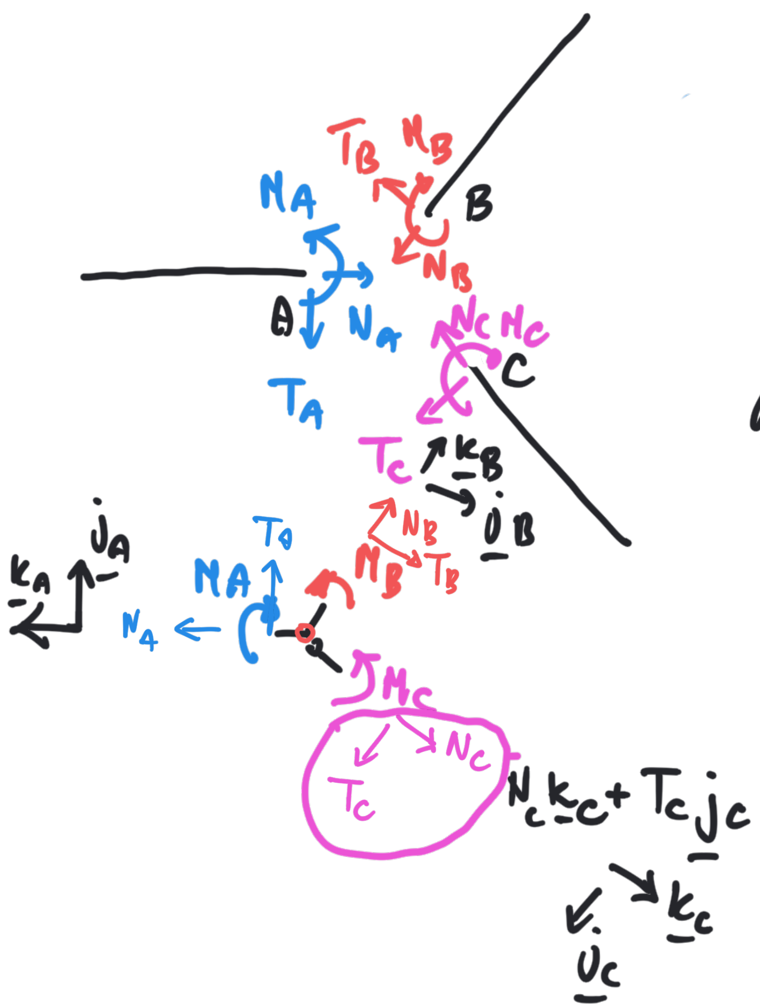
2 cond. scalari

3 condiz. equil. globale

1 condiz. opportuna per ogni sconnessione "semplice"

Giunzioni multiple





$$M_B + M_C - M_A = 0$$

$$N_B \underline{k}_B + T_B \underline{j}_B + N_C \underline{k}_C + T_C \underline{j}_C - N_A \underline{k}_A - T_A \underline{j}_A = \underline{0}$$

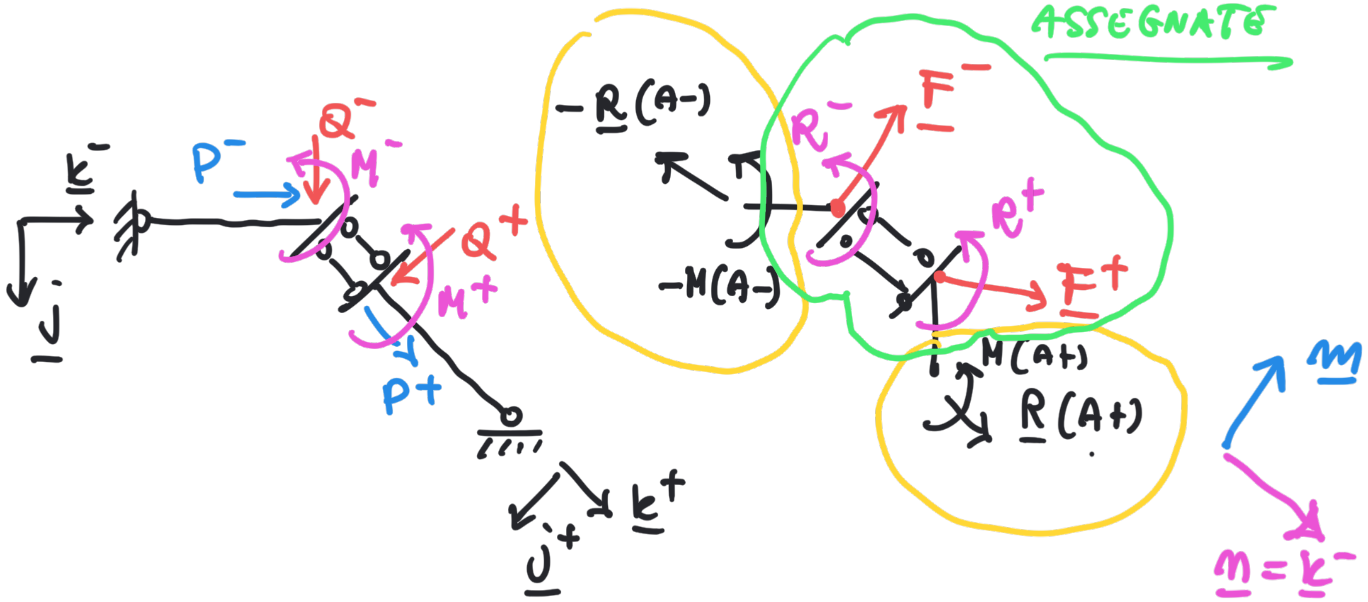
2 cond. scalari

3 condiz. equil. globale

1 condiz. aggiuntiva per ogni sconnessione "semplice"

IN CASO DI DIFFICOLTÀ:

- notazione vettoriale
- PLV



$$0 = L = \left(\underline{R}(A^+) + \underline{F}^+\right) \cdot \underline{u}_A^+ + \left(M(A+) + R^+\right) \vartheta_A^+$$

$$+ \left(-\underline{R}(A^-) + F^-\right) \cdot \underline{u}_A^- + \left(-M(A-) + R^-\right) \vartheta_A^-$$

$$\vartheta_A^+ - \vartheta_A^- = 0$$