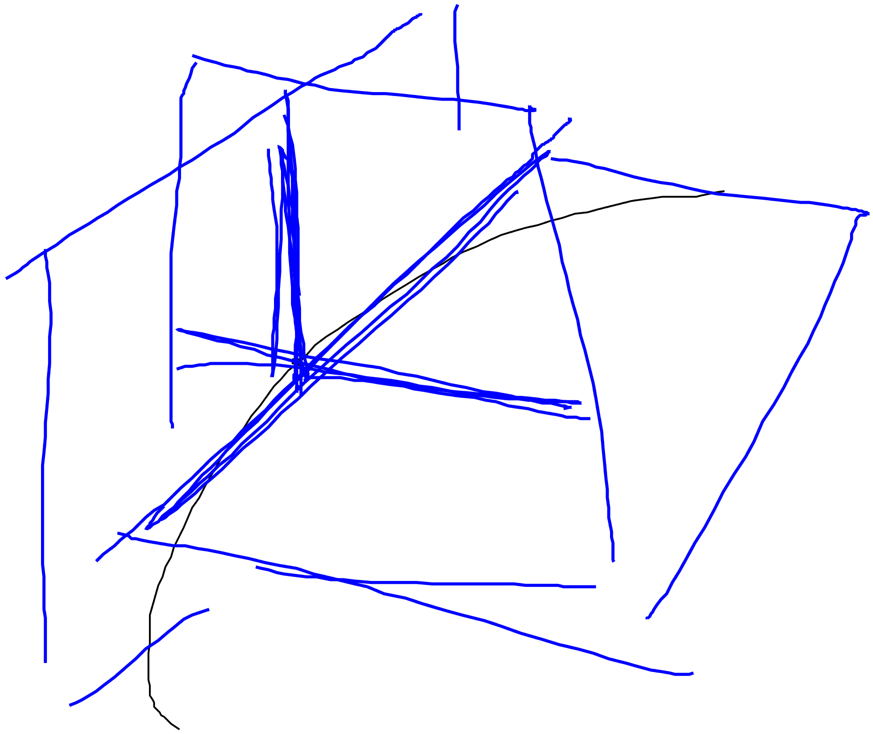

Flessione: $\varkappa = \frac{1}{R}$

Torsione: $\tau = \frac{1}{T}$

Versori lungo gli assi del tr. princ.:

$\vec{t}, \vec{n}, \vec{b}$

$$\begin{pmatrix} \vec{t}\,' \\ \vec{n}\,' \\ \vec{b}\,' \end{pmatrix} = \begin{pmatrix} 0 & \varkappa & 0 \\ -\varkappa & 0 & -\tau \\ 0 & \tau & 0 \end{pmatrix} \begin{pmatrix} \vec{t} \\ \vec{n} \\ \vec{b} \end{pmatrix}$$

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$$\ell: \begin{cases} x = z \\ x^2 + y + z^3 - 3 = 0 \end{cases}$$

Tr. princ. in $P \equiv (1, 1, 1)$

$$\begin{cases} x = u & x' = 1 \\ y = -u^2 - u^3 + 3 & y' = -2u - 3u^2 \\ z = u & z' = 1 \end{cases}$$

P
1
-5
1

$\Pi_\sigma : x = z$

$$t : \frac{x-1}{1} = \frac{y-1}{-5} = \frac{z-1}{1}$$

$\Pi_n : 1 \cdot (x-1) - 5(y-1) + 1(z-1) = 0$

$x - 5y + z + 3 = 0$

$$n : \begin{cases} x - z = 0 \\ x - 5y + z + 3 = 0 \end{cases}$$

$$\begin{pmatrix} 1 & 0 & -1 \\ 1 & -5 & 1 \end{pmatrix}$$

$$(\ell_1, \ell_2, \ell_3) \sim \left(\begin{vmatrix} 0 & -1 \\ -5 & 1 \end{vmatrix}, -\begin{vmatrix} 1 & -1 \\ 1 & 1 \end{vmatrix}, \begin{vmatrix} 1 & 0 \\ 1 & -5 \end{vmatrix} \right)$$

$= (-5, -2, -5)$

$\sim (5, 2, 5)$

$$\Pi_q : 5(x-1)+2(y-1)+5(z-1)=0$$

$$5x+2y+5z-12=0$$

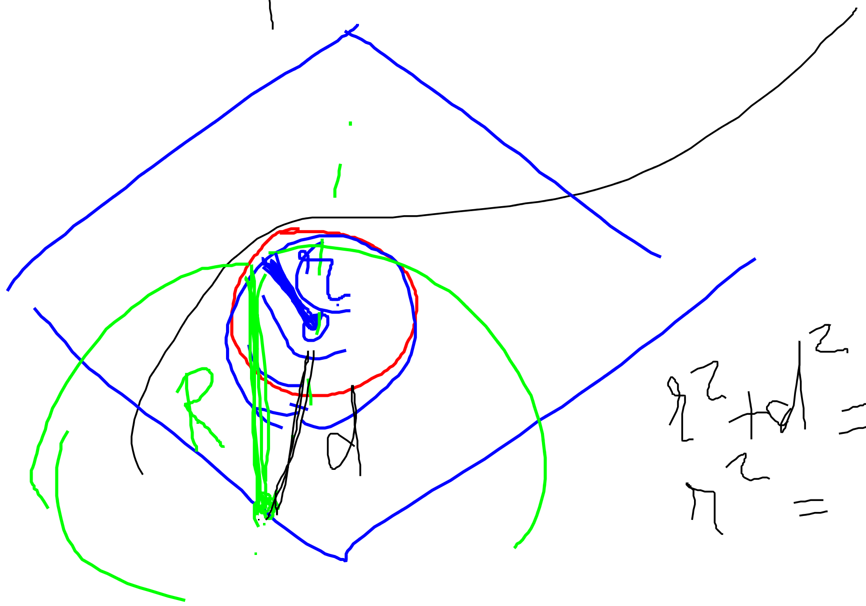
$$\mathcal{C}: \begin{cases} x-5y+z+3=0 \\ 5x+2y+5z-12=0 \end{cases}$$

Circ. osculatrice ad una curva dello spazio in un punto semplie ord. P

Si trova come $\cap$ di un piano con una sfera.

Il piano: il piano osculatore

La sfera: una delle ∞^1 sfere osculatrici



$$r^2+d^2=R^2$$
$$r^2=R^2-d^2$$