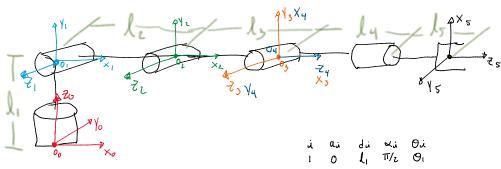
Cinemática Directa de un robot 5R

lunor 38 do naujombro do 2022 00:41 n. m.



$${}^{\circ}H_{1}(\theta_{1}) = \begin{bmatrix} c\theta_{1} & c & s\theta_{1} & c \\ s\theta_{1} & c & -c\theta_{1} & c \\ c & 1 & c & l \\ c & 0 & 0 & 1 \end{bmatrix}$$

$$|\mathcal{H}_{2}(\theta_{\ell})| = \begin{bmatrix} C\theta_{2} & -S\theta_{2} & O & \mathcal{L}_{2}C\theta_{2} \\ S\theta_{2} & C\theta_{2} & O & \mathcal{L}_{2}S\theta_{2} \\ O & O & | & O \\ O & O & O & | \end{bmatrix}$$

$$^{0} H_{3} = \begin{bmatrix} ((\theta_{c} + \theta_{3}) (\theta_{1} & -5(\theta_{c} + \theta_{3}) (\theta_{1} & 5\theta_{1} & (\theta_{1} I_{3}((\theta_{c} + \theta_{3}) + I_{c}(\theta_{1} I_{3}((\theta_{1} I_{3}(\theta_{1} I_{3}((\theta_{1} I_{3}(\theta_{1} I_{3}(\theta_{1} I_{3}((\theta_{1} I_{3}(\theta_{1} I_{3}(\theta_{1}$$

$${}^{0}H_{5} = \begin{bmatrix} 5\theta_{1} + 6\theta_{2} + 6\theta_{3} + \theta_{4}) & (\theta_{1} + \theta_{2} + \theta_{4}) & (\theta_{1} + \theta_{2} + \theta_{4}) & (\theta_{2} + \theta_{3} + \theta_{4}) & (\theta_{3} + \theta_{4}) & (\theta_{5} + \theta_{5} + \theta_{4}) & (\theta_{5} + \theta_{5} + \theta_{5} + \theta_{5}) & (\theta_{5} + \theta_{5} + \theta_{5} + \theta_{5}) & (\theta_{5} + \theta$$

$$\begin{array}{c} (\Theta_{7} \circ \Theta_{1} - (\Theta_{2} + \Theta_{3} + \Theta_{4}) & (\Theta_{1} \circ \Theta_{5} \\ -(\Theta_{1} (\Theta_{5} - (\Theta_{2} + \Theta_{4}) \circ \Theta_{4}) & (\Theta_{1} \circ \Theta_{5} \\ - \circ (\Theta_{2} + \Theta_{3} + \Theta_{4}) & (\Theta_{5} - \Theta_{5}) & (\Theta_{5} + \Theta_{5}) & (\Theta_{5} - \Theta_{5}) \end{array}$$

$$5(\Theta_2 + \Theta_3 + \Theta_4) \subset \Theta_1$$

$$5(\Theta_2 + \Theta_3 + \Theta_4) \cup S\Theta_1$$

$$-((\Theta_2 + \Theta_3 + \Theta_4))$$

$$O$$

$$\begin{array}{c} (\theta_1 \ l_3 ((\theta_2 + \theta_3) + l_1 (\theta_2 + l_4 5(\theta_2 + \theta_3 + \theta_4) + l_5 5(\theta_2 + \theta_3 + \theta_4) \\ 5\theta_1 \ l_3 ((\theta_2 + \theta_3) + l_2 (\theta_2 + l_4 5(\theta_2 + \theta_3 + \theta_4) + l_5 5(\theta_2 + \theta_3 + \theta_4) \\ (l_1 + l_3) 5(\theta_2 + \theta_3) + l_2 5\theta_2 - l_4 ((\theta_2 + \theta_3 + \theta_4) - l_5 ((\theta_2 + \theta_3 + \theta_4) + \theta_4) \\ \end{array}$$