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DINÁMICA DE SISTEMAS MECÁNICOS

Diagram illustrating the addition of two vectors a_1 and a_2 to find their resultant y using the triangle rule. Vector a_1 is blue, a_2 is green, and the resultant y is red. The angle between a_1 and a_2 is α . The angle between a_1 and y is ϕ_1 , and the angle between a_2 and y is ϕ_2 . The formula $\phi = \arctan(y/x)$ is written below.

$$A^2 = B^2 + C^2 - 2BC \cos(\alpha)$$

$$d^2 = a_1^2 + a_2^2 - 2a_1a_2 \cos(\alpha)$$

$$\theta_2 = \pi - \alpha$$

$$q_{\perp} = q - \mu$$

$$\mu = \sin^{-1}\left(\frac{y_1}{d}\right) = \sin^{-1}\left(\frac{a_2 \sin(q_2)}{d}\right)$$

$$q_2 = \arctan(y/x) - \sin^{-1}\left(\frac{a_2 \sin(q_2)}{d}\right)$$

$$\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} a_1 \cos q_1 + a_2 \cos(q_1 + q_2) \\ a_1 \sin q_1 + a_2 \sin(q_1 + q_2) \end{bmatrix}$$

¿Porque no coord. polares?

No puedo encontrar los ángulos

Para el lab hay que encontrarlos
con matrices M_2

