

$\theta_{01} := 180^\circ$

$\theta'_{01} := 0$

$L_1 := 1$

$m_1 := 1$

$g := 9.81$

$t_{end} := 8$

$\theta_{02} := 90^\circ$

$\theta'_{02} := 0$

$L_2 := 0.2$

$m_2 := 0.5$

$\theta_{03} := 45^\circ$

$\theta'_{03} := 0$

$L_3 := 0.4$

$m_3 := 0.3$

$D(t, u, \theta'') := \left[\begin{array}{l} \theta_1 \ \theta'_1 \ \theta_2 \ \theta'_2 \ \theta_3 \ \theta'_3 := \left[\begin{array}{l} u_1 \ u_2 \ u_3 \ u_4 \ u_5 \ u_6 \end{array} \right] \\ \theta''_1 \ \theta''_2 \ \theta''_3 := \left[\begin{array}{l} v_1 \ v_2 \ v_3 \end{array} \right] \\ eq_4(v) := \text{stack}(eq_1, eq_2, eq_3) \\ \theta'' := \text{al_nleqsolve}(\theta'', eq_4) \\ \text{stack}(\theta'_1, \theta''_1, \theta'_2, \theta''_2, \theta'_3, \theta''_3) \end{array} \right.$

$\theta'' := \left[\begin{array}{l} 0 \\ 0 \\ 0 \end{array} \right]$

$U := \text{rkfixed}(\text{stack}(\theta_{01}, \theta'_{01}, \theta_{02}, \theta'_{02}, \theta_{03}, \theta'_{03}), 0, t_{end}, 500, D)$

$\left[\begin{array}{l} T \ \theta_1 \ \theta_2 \ \theta_3 \end{array} \right] := \left[\begin{array}{l} \text{col}(U, 1) \ \text{col}(U, 2) \ \text{col}(U, 4) \ \text{col}(U, 6) \end{array} \right]$

$n := [1.. \text{rows}(U)]$

$X1 := \overrightarrow{x_1}$

$Y1 := \overrightarrow{y_1}$

$X2 := \overrightarrow{x_2}$

$Y2 := \overrightarrow{y_2}$

$X3 := \overrightarrow{x_3}$

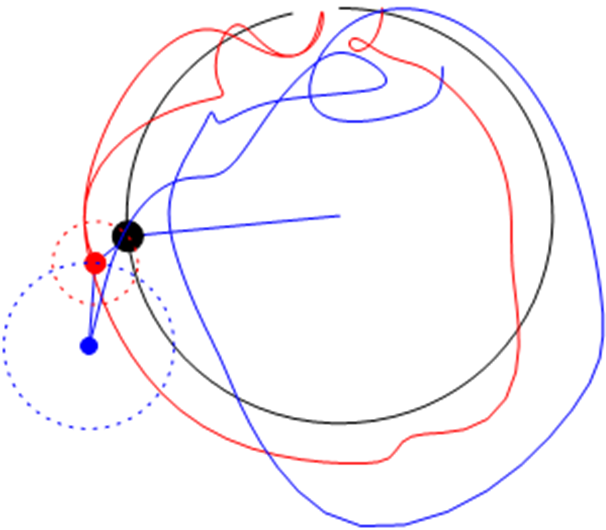
$Y3 := \overrightarrow{y_3}$

$\varphi := [0, 4..360]^\circ$

$S := \overrightarrow{\sin(\varphi)}$

$C := \overrightarrow{\cos(\varphi)}$

$\Pi(n) := \left[\begin{array}{l} \left[\begin{array}{l} 0 \ 0 \\ X1_n \ Y1_n \\ X2_n \ Y2_n \\ X3_n \ Y3_n \end{array} \right] \\ \left[\begin{array}{l} X1_n \ Y1_n \ \text{"."} \ 15 \ \text{"black"} \end{array} \right] \\ \left[\begin{array}{l} X2_n \ Y2_n \ \text{"."} \ 10 \ \text{"red"} \end{array} \right] \\ \left[\begin{array}{l} X3_n \ Y3_n \ \text{"."} \ 8 \ \text{"blue"} \end{array} \right] \\ \text{augment}(X1 [1..n]', Y1 [1..n]) \\ \text{augment}(X2 [1..n]', Y2 [1..n]) \\ \text{augment}(X3 [1..n]', Y3 [1..n]) \\ \text{augment}(L_2 \cdot C + X2_n, L_2 \cdot S + Y2_n) \\ \text{augment}(L_3 \cdot C + X3_n, L_3 \cdot S + Y3_n) \end{array} \right.$



Alvaro

$\text{appVersion}(4) = \text{"1.73.9126.0"}$