TAREA 3

Cinemática de robots

ING. MECATRONICA
MAESTRO: Moran Garabito Carlos Enrique
8-B T/M
ALUMNO: Christian Josué Esquivel Cervantes

UNIVERSIDAD POLITÉCNICA
DE LA ZONA METROPOLITANA DE GUADALAJARA

1

$$\begin{vmatrix} 1 & 0 & 0 \\ 0 & cos60 & -sen60 \\ 0 & sen60 & cos60 \end{vmatrix} = \begin{vmatrix} cos70 & 0 & sen70 \\ 0 & 1 & 0 \\ -sen70 & 0 & cos70 \end{vmatrix}$$

Xy

xyz

$$\begin{vmatrix} 0.342 & 0 & 0.94 \\ 0.814 & 0.5 & -0.20 \\ -0.77 & 0.566 & 0.17 \end{vmatrix} * \begin{vmatrix} cos10 & -sen10 & 0 \\ sen10 & cos10 & 0 \\ 0 & 0 & 1 \end{vmatrix} = \begin{vmatrix} 0.336 & -0.6 & 0.44 \\ 0.888 & 0.351 & -0.276 \\ -0.812 & 0.434 & 0.171 \end{vmatrix}$$

2

$$\begin{vmatrix} 1 & 0 & 0 \\ 0 & cos40 & -sen40 \\ 0 & sen40 & cos40 \end{vmatrix} \begin{vmatrix} cos50 & 0 & sen50 \\ 0 & 1 & 0 \\ -sen50 & 0 & cos50 \end{vmatrix} \begin{vmatrix} 1 & 0 & 0 \\ 0 & cos & -sen \\ 0 & sen & cos \end{vmatrix}$$

xy

$$\begin{vmatrix} -0.839 & 0 & -0.544 \\ 0.405 & 0.660 & -0.625 \\ -0.362 & 0.745 & 0.558 \end{vmatrix} \quad \begin{vmatrix} -839 & 0.4402 & -0.524 \\ -4052 & -0.473 & -.777 \\ -0.362 & 571 & 0.733 \end{vmatrix}$$

3

$$\begin{vmatrix} 1 & 0 & 0 \\ 0 & cos & -sen \\ 0 & sen & cos \end{vmatrix} \begin{vmatrix} cos & -sen & 0 \\ sen & cos & 0 \\ 0 & 0 & 1 \end{vmatrix}$$

xz

$$\begin{vmatrix} 0.60 & 0.75 & 0 \\ -0.306 & 0.64 & -0.40 \\ -0.614 & 0.601 & 0.108 \end{vmatrix} \begin{vmatrix} 0.931 & -0.309 & 0 \\ 0.290 & 0.694 & -0.343 \\ 0.105 & 0.326 & 0.949 \end{vmatrix}$$

4

$$\begin{vmatrix} 1 & 0 & 1 \\ 0 & 0.8660 & -0.5 \\ 0 & 0.5 & 0.8660 \end{vmatrix} \begin{vmatrix} 0.9848 & -0.1736 & 0 \\ 0.1736 & 0.9548 & 0 \\ 0 & 0 & 1 \end{vmatrix} = \begin{vmatrix} 0.9849 & -0.1736 & 0 \\ 0.1503 & 0.8528 & -0.5 \\ 0.0868 & 0.4924 & 0.866 \end{vmatrix}$$

Xz

$$\begin{vmatrix} 0.999 & 0 & 0 \\ 0.296 & 0.813 & -0.5 \\ -0.170 & 0.469 & 0.866 \end{vmatrix} \begin{vmatrix} 1 & 0 & 0 \\ 0 & 0.866 & -0.5 \\ 0 & -5 & 0.866 \end{vmatrix} \begin{vmatrix} 0.999 & 0 & 0 \\ 0.296 & 0.454 & -0.839 \\ 0.170 & 0.839 & 0.515 \end{vmatrix}$$

$$\begin{vmatrix} 0.866 & 0 & 0.5 \\ 0 & 1 & 0 \\ -0.5 & 0 & 0.866 \end{vmatrix} \quad \begin{vmatrix} 0.984 & -0.173 & 0 \\ 0.173 & 0.984 & 0 \\ 0 & 0 & 1 \end{vmatrix} = \begin{vmatrix} 0.85 & -0.150 & 0.5 \\ 0.173 & 0.984 & 0 \\ -0.492 & 0.80 & 0.866 \end{vmatrix}$$

$$\begin{vmatrix} 0.852 & 0.150 & 0.5 \\ 0.173 & 0.484 & 0 \\ -0.492 & 0.868 & 0.866 \end{vmatrix} \quad \begin{vmatrix} 1 & 0 & 1 \\ 0 & 0.866 & -0.5 \\ 0 & 0.5 & 0.866 \end{vmatrix} = \begin{vmatrix} 0.852 & 0.119 & 508 \\ 0.173 & 0.852 & -0.402 \\ -0.492 & 0.508 & 0.706 \end{vmatrix}$$