

ISCG

Part 3 : Matlab Applications

(Version 1.1)

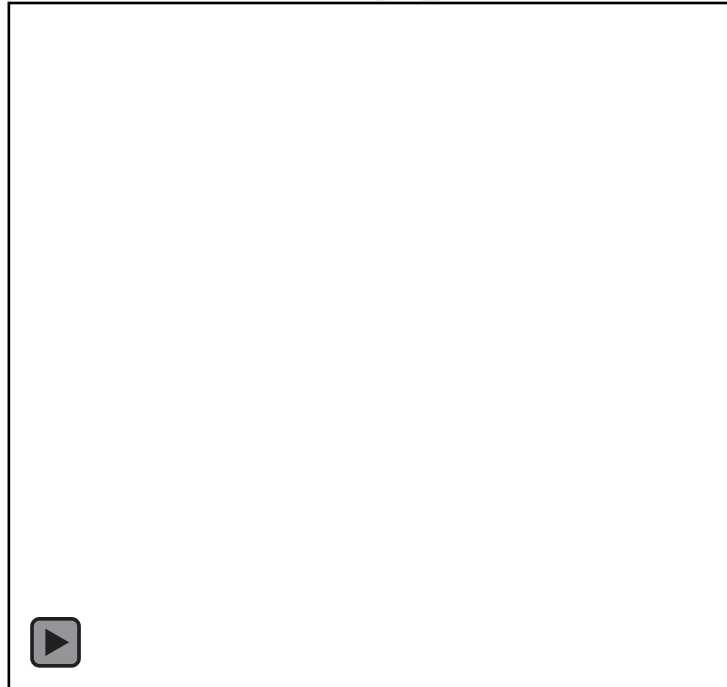
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Application Matlab

- 1) Write the function Rot2Mat.m
input : e vector $[e_x; e_y; e_z]$ and angle theta (rad)
output : rotation matrix R
- 2) Write the function Mat2Rot .m
input : rotation matrix R
output : e vector $[e_x; e_y; e_z]$ and angle theta (rad)
- 3) Write a script
 - Compute R1 as rotation along $e_1 = [-\cos(45^\circ), \sin(45^\circ), 0]$ and $\theta_1 = 35^\circ$
 - Determine e_2 and θ_2 from $R_2 = \frac{1}{3} \begin{bmatrix} -1 & -2 & 2 \\ -2 & -1 & -2 \\ 2 & -2 & -1 \end{bmatrix}$
 - Determine e_3 and θ_3 from the successive rotation R1 and R2

Application Matlab

4) Make an animation where the head move to say « yes » two times



Use functions `getframe.m` and `VideoWriter.m`