

Results using well tuned gain parameters

This directory contains the simulation results for the following parameters.

Inputs

initial configuration = **[0.6, 0.0, 0.0, 0.0, -0.35, -0.698, -0.505, 0.0, 0.0, 0.0, 0.0, 0.0]**

Tsc initial = **[1, 0, 0]**

Tsc goal = **[0, -1, -math.pi/2]**

gains = **[0.18, 0.00015]**

Controller

kp = 0.18

ki = 0.00015

The implemented controller is a feedforward + feedback PI controller

Results files

youBot_Trajectory.csv

youBot_Trajectory file will contain the configuration of the youBot end effector, at each 0.01 second time interval. Comments will be printed in the file, indicating the specific format of the configuration (phi, x, y, J1, J2, J3, J4, J5, W1, W2, W3, W4). ***The youBot_Trajectory.csv file can be loaded into CoppeliaSim Scene6_youBot_cube.***

trajectory_Xerr.csv

trajectory_Xerr file will contains the error-twist, at each 0.01 second time interval. Comments will be printed in the file, indicating the specific format of the error (Wx, Wy, Wz, Vx, Vy, Vz)