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Online trajectory scaling for robot manipulators

The code is structured as follows:

1. Kinematics

In this folder there are the scripts to execute the experiment considering the kinematics model of the robot.

In particular the files are: main.m, move\_kin\_circular.m, move\_kin\_sine.m, circular\_kin.slx and sine\_kin.slx.

In the main file there are two sections in which it’s possible to choose the desired motion to be performed.

Simulation time has to be chosen accordingly with the simulation time on Simulink in order to see the different results.

2)Dynamics

In this folder there are the scripts to execute the experiment considering the dynamic model of the robot.

In particular the files are: main.m, move\_dyn\_circular.m, move\_dyn\_sine.m, circular\_dyn.slx and circular\_dyn.slx.

In the main file there are two sections in which it’s possible to choose the desired motion to be performed.

Simulation time has to be chosen accordingly with the simulation time on Simulink in order to see the different results.

3)Videos

All the recorded results are in this folder. We chose different scenarios which allows to notice the effectiveness of the proposed method.