This document lists the python scripts RPI used for running hybrid force/motion control in RobotStudio simulation environment as well as with a physical ABB robot:

1. Python scripts for simulated hybrid force/motion control in RobotStudio:

<https://github.com/ShuyoungChen/force_motion_control_simulation_RS>

**Note**:

* Software dependencies can be installed here:

Python EGM interface: <https://github.com/rpiRobotics/rpi_abb_irc5>

General toolbox to compute robot Jacobian, forward kinematics, etc: <https://github.com/rpiRobotics/rpi_general_robotics_toolbox_py>

* need to change the robot kinematics parameters accordingly in the function “abb\_irb6640\_180\_255\_robot” in “force\_motion\_control.py”

1. Python scripts for running hybrid force/motion control with physical robot:

<https://github.com/ShuyoungChen/force_motion_control_physical>

Note:

* “no\_ILC\_force\_motion\_control.py” is for force/motion control using generalized damper approach without iterative learning control (ILC)
* “ILC\_force\_motion\_control.py” is for force/motion control with ILC
* need to change the robot kinematics parameters accordingly in the function “abb\_irb6640\_180\_255\_robot” in above two python scripts
* also need to install the dependencies mentioned in 1