Abstract

In this paper a simulink based approach is developed for trajectory tracking of robot manipulator. A robot manipulator is widely used in many industrial application. A robot manipulator moves the end effector to the configuration instructed by the user. The input from the main unit is transformed into the desired configuration through forward kinematics. This configuration is sent to the robot controller to transform the configuration into joint angles. The simulink model is developed to provide basic block to model kinematics and trajectory tracking of robot manipulator. Availability of such library model of robot manipulator software, where the manipulator controller can be modelled using model library blocks and production can be automatically generated using existing code generators for simulink. In this the desired and the actual trajectory of the end effector under different conditions is shown with the help of MATLAB simulation.
- C. Schlegel, T. Haler, A. Lotz, and A. Steck, "Robotic software systems: From code-driven to model-driven designs," in Proc. 14th Int. Conf. on Advanced Robotics, 2009

**Index Terms**

Computer Science  Automation

**Keywords**

Robot Dynamics  Cartesian space motion  Trajectory tracking