

ROS Exercises

Robotics Club

16 July 2012

Build a ROS package with a node that solves the forward kinematics problem for the manipulator shown in figure 1. The link lengths (as shown in table 1) and joint settings are to be stored in the Parameter Server and retrieved by the node.

Table 1: Robot Link Lengths

Link	Length
l_1	0.40 m
l_2	0.30 m
l_3	0.30 m

The node must subscribe to a ROS Topic retrieving the joint angles $\theta_i \in [-\pi/2, \pi/2], \forall i \in 1, 2, 3$ and must publish the $\{S\}$ and $\{T\}$ frame through the ROS::tf package.

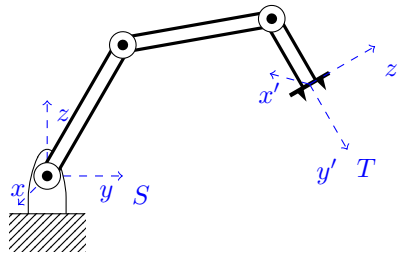


Figure 1: A simple robotic arm with the attached spatial frame $\{S\}$ and tool frame $\{T\}$

Your package folder must be sent compressed to asynodin@mech.upatras.gr by 23/07/2012 09:00. The submitted code will be uploaded after that date to our Dropbox shared folder.