KON318E – Introduction to Robotics

March 05, 2023

Prof. Dr. Hakan Temeltaş

2024-2025 Spring Term Homework 1

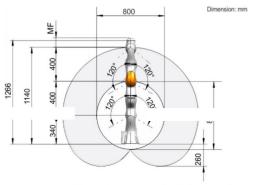
Return Date: November 12, 2023, at 12:00

Question: Consider the following **KUKA LBR iiwa 7 R800** Light Weight robotic arm with the given dimensions and rotation axes:

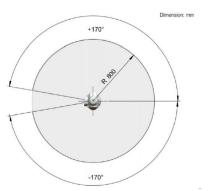
- a) Assign the coordinate frames of the robot manipulator and create the DH-table.
- b) Based on the D-H table, write a MATLAB script to compute the forward kinematic model using MATLAB Symbolic Toolbox or Live Editor.
- c) Verify the forward kinematics model (e.g chect the tip-point position for given join variables)



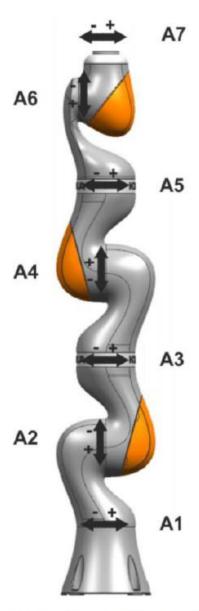
KUKA LBR iiwa 7 R800 Ligh Weight Robot Arm



KUKA LBR iiwa 7 R800 working envelope, side view



KUKA LBR iiwa 7 R800 working envelope, top view



Axis numbering for KUKA LBR iiwa 7 R800