



Introduction to Robotics

Manipulation and Programming

Unit 2: Kinematics

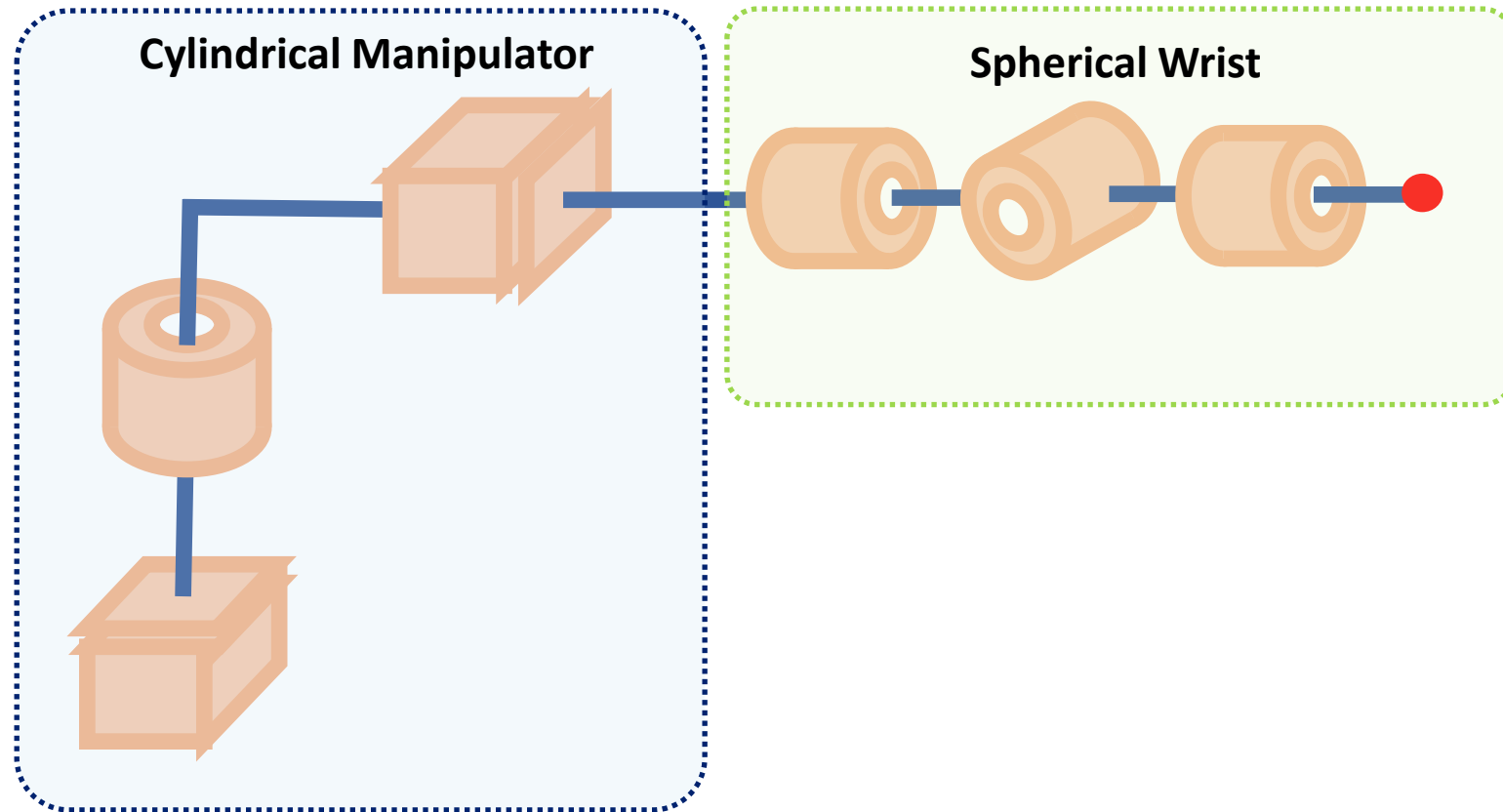
PYTHON LAB PROJECT: CYLINDRICAL ARM AND SPHERICAL WRIST

DR. ERIC CHOU

IEEE SENIOR MEMBER



All Prismatic Manipulator





Problem:

- 1) This is a re-write assignment, we have discussed this robot with cylindrical arm and spherical wrist. Please following the 7 steps to generate the following thing:
 - Kinematic Diagram for both arm and wrist.
 - The Denavit-Hartenberg table for both arm and wrist
 - Create the DH-HTM matrix and the corresponding Rotational matrix R_3^0 and R_6^0
 - Following the 7 steps to calculate the inverse Jacobian matrix and the corresponding path planning equations.

write them down on paper and submit it by image file or word .docx, or .pdf files.
- 2) Write the Python Program for the calculation of Inverse Jacobian Matrix
submit .py or .zip file