

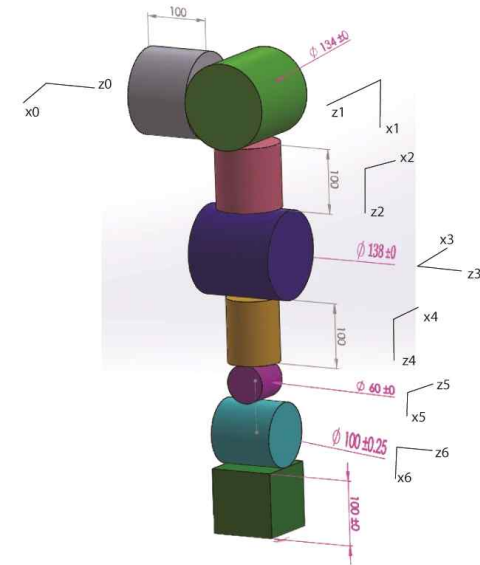
2018 Advanced Robotics(II) Term Project

I. Robot Manipulator Control

1. The 7 DOF manipulator of dual arm robot is given by right figure.

Give a mass of each link, maximum velocity, acceleration, and torque, tack time, and other specification by yourself.

2. Derive the forward and inverse kinematics of the selected robot.
3. Design PD controller, PD + Computer torque control algorithm. And simulate the control of the manipulator.
4. Compare the control result when the uncertainty of manipulator' mass and inertia, damper, or change of payload are given by 10%, 20%, and 30%.
5. Design other robust control algorithm and compare the control result when the uncertainty and change of them are given by 10%, 20%, and 30%.
6. Analyze and compare the control performance of three control algorithm.
7. Make a report.



II. Advanced Creative Robot

1. First find a paper related to an advanced creative robot and summarize and present the paper.
And please address what a creative contributions are comparing with previous research.

2017 Advanced Robotics(II) Term Project Evaluation

I. Robot Manipulator Control

[illegible]

II. Advanced Creative Robot Paper Work Evaluation

[illegible]