

Homework 2

[S21] Advanced Robotics

Robot – Tripteron <https://www.youtube.com/watch?v=beuY401hfh8>

Tasks:

1. Develop VJM model of the robot
 - Links are flexible cylindrical beams, length = 1 m
 - Active joints are flexible
 - Rigid platform – distance from corners to center = 0.1 m
2. Implement VJM model in Matlab or Python [1][2]
3. Create deflection maps for 100N force in X, Y, Z directions

Assumption of other link and joint parameters take from Homework 1, but you should include it in the report.

Requirements:

1. VJM model
2. Code/function explanation
3. Report:
 - Robot design
 - VJM model
 - Deflection map
 - Comparison with MSA
 - Analysis of obtained results
 - Link to your public project on github.com

Submit only report to moodle. Later submission policy -20% per week.

[1] Cheat penalty: 0 for Homework.

[2] It is better to use Google Collab notebook or MATLAB Live Script