

Assignment 3:

PD (Proportional Derivative) Controlled is to be implemented in the **3D** quadrotor to achieve waypoint navigation.

For this, **Controller.m** is the file where the **PD** controller is to be implemented, and **runsim.m** is the file to run the simulation.

Objective:

Implement **P-D** Controller for linear acceleration and torque parameters using setpoint and current value parameters (Info about each parameter is given in the code).

Default **P** and **D** gains are made zero which has to be tuned.

Make quadrotor to reach **waypoints** ([1, 1, 2],
[4, 5, 3],
[2, 1, 8],
[4, 4, 4])

The waypoint coordinates are to be fed in a Matrix given in **runsim.m**.

Tune the **P-D** controller such that the quadrotor travels as close to the planned trajectory with minimum deviation.