

HW of Chap8 – rabbit5024

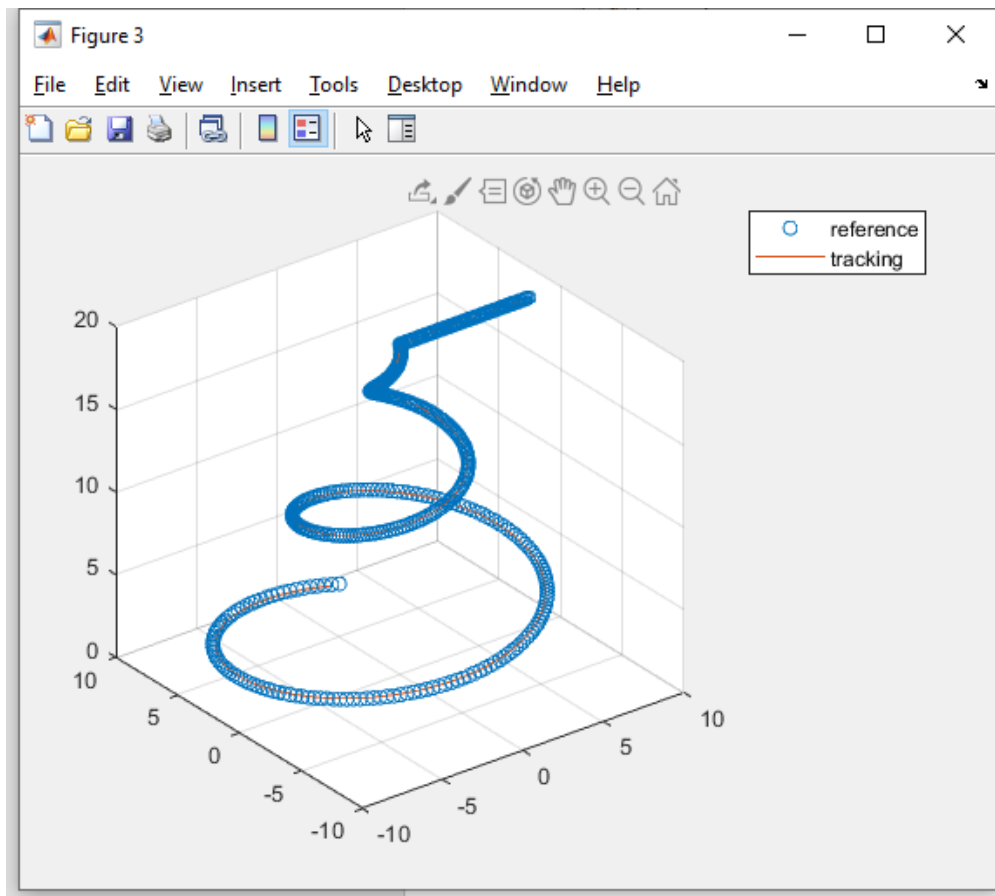
```
% Initial Conditions
p_0 = [8 0 20];
v_0 = [0 0 0];
a_0 = [0 0 0];

% Prediction horizon = K*dt; Control horizon = 1
dt = 0.1;
K = 20;

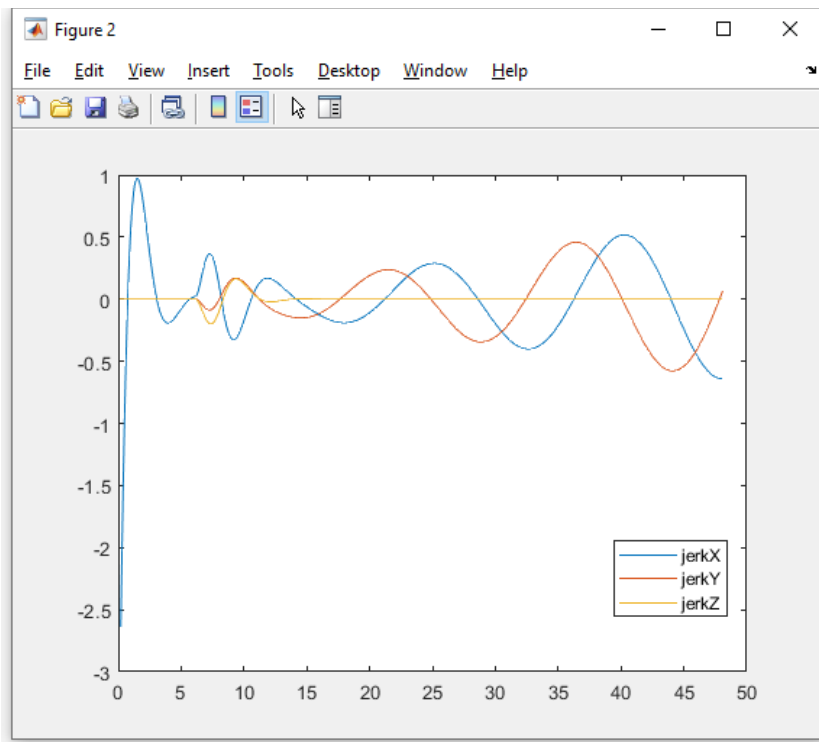
% weight for pos vel acc jerk
weight = [10;1;1;1];

% Constraints
% |v_xy|<=6, |a_xy|<=3, |j_xy|<=3, -1<=v_z<=6, -1<=a_z<=3, -2<=j_z<=2
constraintXY = [6 6 3 3 3 3];
constraintZ = [6 1 3 1 2 2];
```

3D Spiral Tracking Results



The calculated control output 'jerk' for 3 axes



The Tracking results of z-axis

