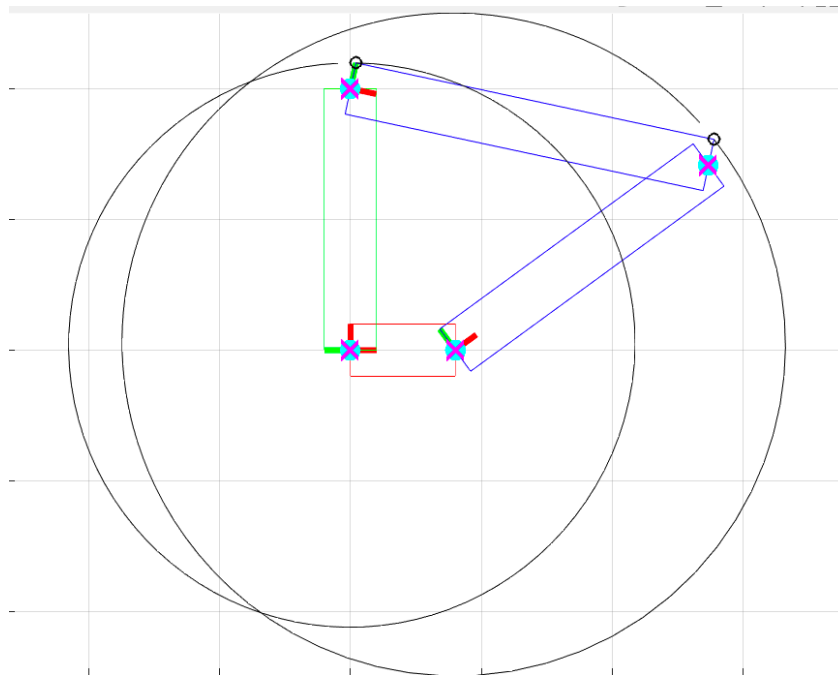


HW2 Report

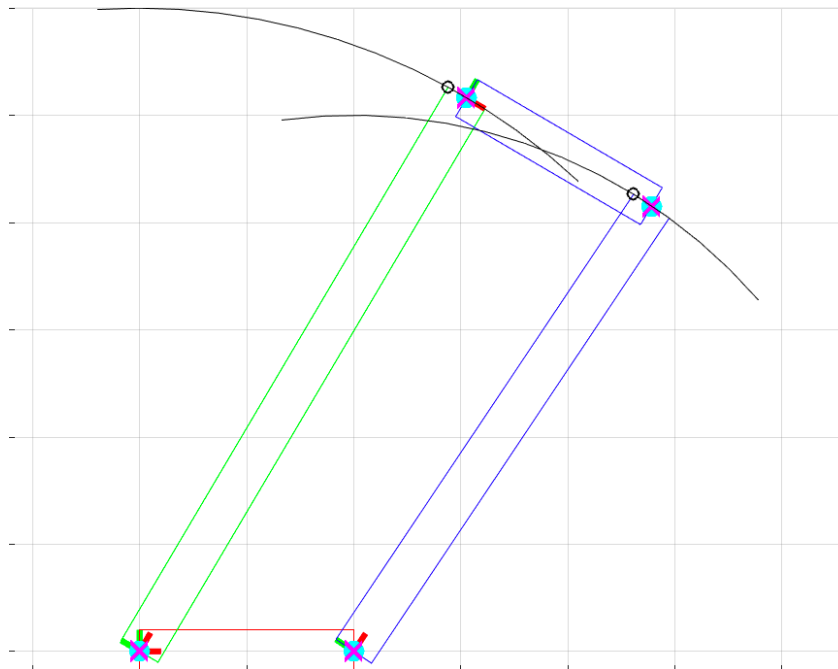
Xiankang Wu – U59844514

Simulation results:

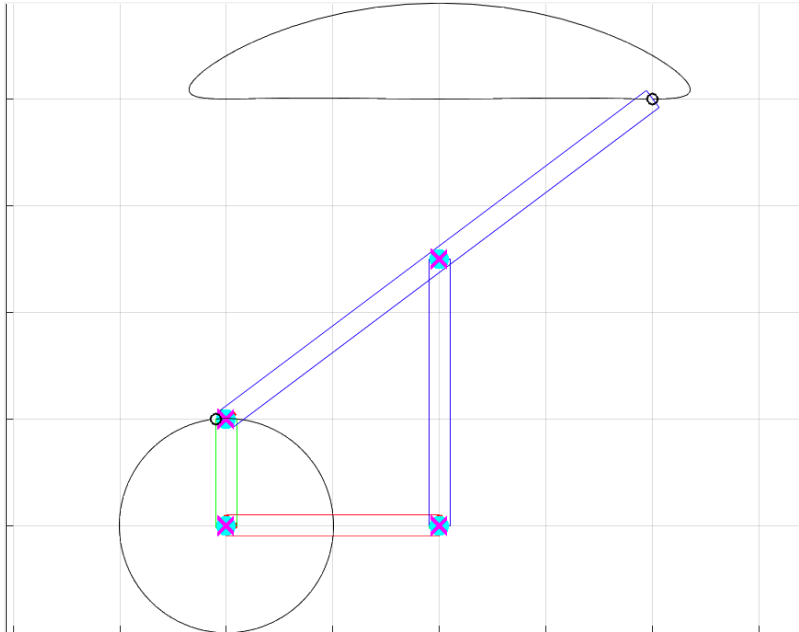
- Linkages(1) - Drag-link



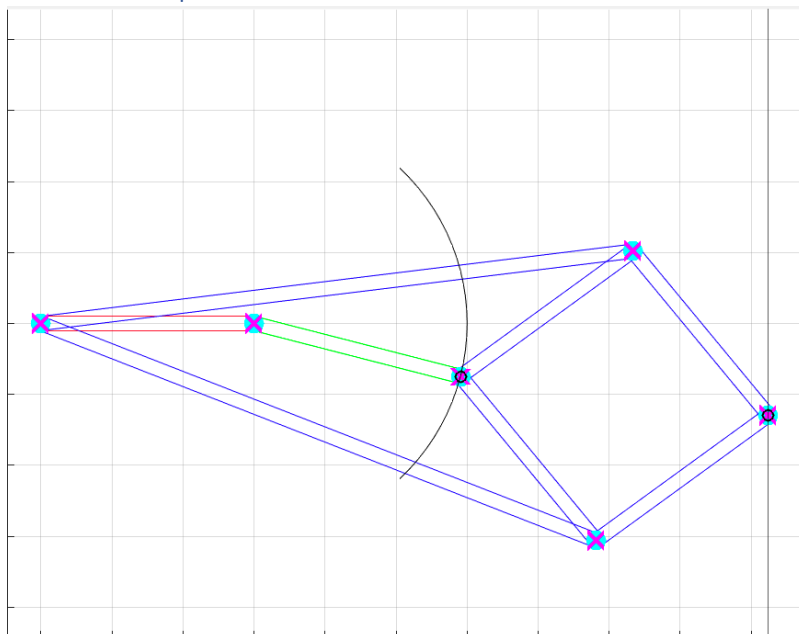
- Linkages(2) – Double-rocker



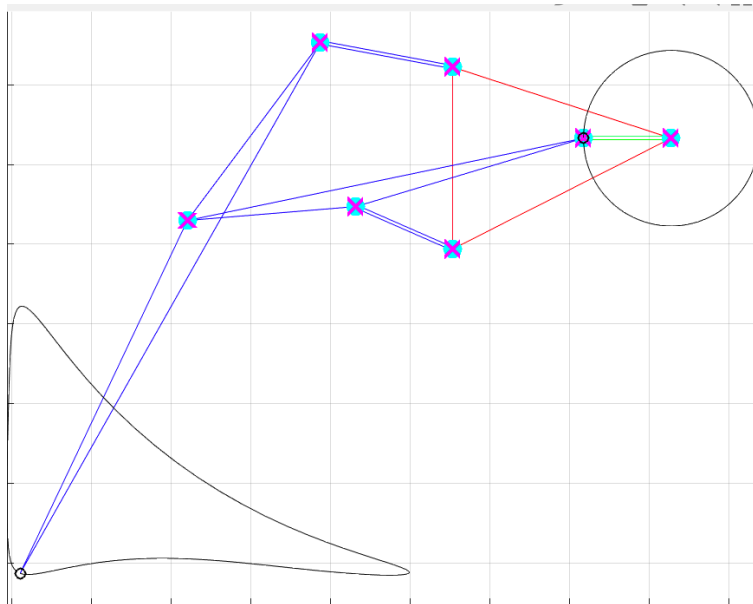
- Linkages(3) – Hoekens



- Linkages(4) – Peaucellier-Lipkin



- Linkages(5) – Klann



Discussion:

The method I used to control the rotation is simply editing `% Simulation loop` Part of the code. I added an extra integer variable `isCounterClockwise` as a flag, with 1 indicating if the current rotation is counter-clockwise, -1 otherwise. Then when I wanted to update `links(driver).angleTarget`, I multiplied `dt*angVel` with `isCounterClockwise` to add or subtract delta `angVel` for each time slot.

Currently there is one issue with my code. Within simulation time ($T = 1$), Drag-link linkage cannot draw a full cycle. I believe it is caused by the timer fluctuation during simulation, where there is possibly a longer or shorter running time than 1 second.

Reference:

1. <http://robotronics09.blogspot.com/2011/01/klann-mechanism.html>
2. All links listed in the assignment page