

MATLAB Assignment

Due Date: November 18, 2010

November 11, 2010

Problem 1. Consider the Example 3.1.2 at page 54 of the textbook. For that mechanism, use $l = 2$ and $\omega = 6$ rad/sec. Generate a pair of input files `twoBody.acf` and `twoBody.adm` and use your `simEngine2D` to perform 10 seconds worth of Kynematics analysis of the mechanism using a step size of $\Delta t = 0.001$ seconds. Specify in the acf file that the output should be saved at 500 intermediate points in the file `twoBody.res`.

What to submit. Email the TA by Th, Nov 18, 23:59 PM a zipped file that has a directory with your name that contains the following:

- Your `twoBody.acf` and `twoBody.adm` input files
- Your MATLAB files that make up `simEngine2D`. The TA will use the command `simEngine2D('twoBody')` to run the simulation that is expected to produce `twoBody.res`
- A set of nine plots that show the time evolution of the x and y components of point O_2 on body 2. Also plot the time evolution of ϕ_2 . You should plot position, velocity and acceleration information