FINAL INSTRUCTIONS FOR SEMESTER MATHEMATICA PROJECT

Due: no later than 5 pm on 20 April

We have developed most of the background we need to solve elegantly the problem posed at the beginning of the semester. In the first installment, you determined the equations of motion that will allow you to analyze this problem. Now, your task is to use the techniques we have developed over the last several weeks to solve this problem numerically.

For the parameters given in the document "First Assignment", use recursion techniques to determine where (i.e., at what angle with respect to the vertical) the person should step off the Ferris wheel in order to land in a boat 1 meter long (I realize this is a small boat, but the size does not matter as much as how you program this).

The first assignment you submitted accounted for 2 of the ten total points this assignment is worth.

You will need to submit :

1. A Mathematica notebook file (.nb file) with the program that will determine the angle the person should step off the Ferris wheel to hit the boat using the parameters given in the initial assignment. A correct solution will earn 6 of the remaining 8 points on this assignment. Programs that do not compile will receive zero of the six points.

2. You must submit also a description of your program, indicating what each variable means and what each step of your program is doing. You may submit this either as a .doc (or .docx) file, a separate .nb file, or you may imbed this information as comments in your Mathematica program. I will grade you for completeness and correctness; this part of the project will earn a maximum of 2 points.

All portions of this assignment must be submitted via email to dslavsk@luc.edu using your Loyola email address. Please submit this material no later than 5 pm on 20 April (this is later than the date given in the syllabus), but since we know the end of the semester becomes hectic, I recommend completing this before the deadline.