03-512/02-512/03-712/02-712	Computational Methods for Biological Modeling and Simulation
Wean Hall 5310	Tuesdays and Thursdays 3:00pm-4:20pm
Lecturer: Russell Schwartz	

Final Project Guidelines

1 Project Write-ups

To remind everyone, we will be on a non-standard schedule for the last week of classes for final presentations. We will not meet Tuesday but will meet the usual time and place Thursday December 5 to begin presentations and will finish them Friday Dec 6 at noon in GHC 4405.
You should have one project write-up per group written in the form of a technical paper from the experimental biology literature. Project write-ups are due for everyone by the start of class on Dec 5, regardless of whether you are presenting on Dec 5 or Dec 6. Those of you with a lot of experience writing papers can feel free to choose a format you feel is appropriate for the material. For the rest of you, I will suggest the following general structure:

1. Title: a brief but descriptive title
2. Authors
3. Abstract: a short summary of the content of the document. It should cover the following points in a sentence or two each:
   (a) What problem does the work address and why is it important?
   (b) What general approach did you use?
   (c) What were the results?
   (d) What major conclusions can you draw from the results?
4. Introduction: a longer description of the project area covering the following points:
   (a) What general area and specific questions are you examining?
   (b) Why are these topics important?
   (c) How have people examined these questions in the past and why are new approaches needed now?
   (d) What general kinds of methods are you applying and why are they appropriate to the problem?
   (e) What, briefly, will the remainder of the paper cover?
5. Methods: a description of the specific approach you used, in sufficient detail that another expert in the field could duplicate your work based on the description. It should cover the following points:
   (a) What models and algorithms did you use?
   (b) What datasets did you use and, if applicable, what curation did you apply to them?
   (c) What were your experimental protocols?
   (d) What kinds of statistical or other analysis did you do on your data or results?

6. Results: a listing of all experimental results and the outcomes of all analyses you did. It is generally best to stick to just the direct outcomes here and avoid any interpretation of results in this section. Bear in mind that figures and tables can improve readability a lot.

7. Discussion: a discussion of the major outcomes of your paper

   (a) What did you accomplish? (Briefly summarize the prior sections.)

   (b) What conclusions can you draw from your results?

   (c) Is there anything else you want to add? (e.g. Were there problems with the approach you chose? How might one build on your work or approach this problem differently in the future?)

8. References: a bibliography of sources used in preparing your approach or your write-up

2 Talks

Your talk should cover essentially the same material as your project writeup (introduction, methods, results, and discussion) although it can be briefer on most points. Again, visuals will help a lot in presenting your results. You should plan on at most a 10 minute talk for those of you working individually, 14 minutes for pairs, 18 for groups of three, or 22 minutes for groups of four, followed by 3 minutes for questions and setup time for the next group. Do not feel obliged to fill the time alotted if you do not need it, but please practice your talk in advance and make sure you can deliver it in the available time. We will need to be strict about the upper limit in order to make sure there is time for everyone's presentations. For those of you working in teams, please make sure all group members participate about equally in the presentation.

I will have a Windows XP laptop with Office and Acrobat Reader available for presentations. I will ask that, except in exceptional circumstances, you plan to present your talk from my laptop and have it uploaded to Blackboard at least one hour before class so I have time to download all of them. We have to get through all of the talks in the time alotted, so we will not have time to deal with the usual A/V problems that come with switching laptops between talks. Feel free to send a draft sooner if you want me to make sure it displays correctly on my computer.

I will make a signup sheet for talk slots available in the week before the talks. You can sign up in class or come to my office that week to sign up. Talks will be presented in the order of the list. We will cover as many talks as we can on December 5 and finish on December 6. Everyone is expected to attend class on both days of the project presentations.