

**Homework 3 (Due: 4/2/2013)**  
CSC8840, spring 2013  
Dr. Xiaolin Hu

In homework 3, you need to develop an agent-based model using Netlogo. You can choose your model based on one of the following three cases:

1. Anything related to your own research (if the complexity is enough, two students can work together as a group).
2. Any “interesting” problem that you are interested in modeling and studying.
3. One of the “combined behaviors and groups” on page <http://www.red3d.com/cwr/steer/>. Note: if you choose the “Leader Following steering behavior”, you need to implement both modes.

Some extra requirements are given below:

- Case 1 and case 2 are encouraged. However, for these two cases you need to communicate with the instructor to get an approval first.
- For case 1, you can choose to use JAVA or DEVSJAVA instead of Netlogo. But it has to be agent-based simulation.
- For case 2, you need to justify that your problem (or similar problem) is not already in the existing model library of Netlogo.
- If you choose case 3, your final project cannot be based on homework 3.

Turn in your model through email (email address: [2013Spring8840@gmail.com](mailto:2013Spring8840@gmail.com)) by 4/2/2013 midnight. Name your model as “HW3\_2013\_XXX”, where XXX is your first name initial plus last name. For example, if your name is Haidong Xue, your model should be named as HW3\_2013\_HXue. The turned-in Netlogo model should have at least two buttons: a setup button and a go button. The setup button is for setting up the simulation and the go button is for running the simulation. The TA will first click the setup button and then the go button to test and grade your model.

On 4/3/2013, each student will demonstrate his/her turned-in model to the class using the TA’s computer. Each demonstration is no more than 4 minutes, where no more than 2 minutes can be used for explaining the model design.