

Homework Assignments #17 & #18  
HW 17: Due Fr, April 7, 5pm as hardcopy  
HW 18: Due Sa, April 8, 5pm via ~/share.dir/

**HW 17 (due Fr, Apr. 7, 5pm): Results: Figures & Interpretation:**

We have now entered the phase of your main project, in which you work on getting your results. Run your program to obtain results. In most cases results of your main project mean that you make figures. Some of your results might be also in the form of a table. So for this homework, you have to use your running program to simulate data and you have to make figures of your data. For many of you there might be an additional step of analysis of your data.<sup>30</sup> So, for this homework you should decide on what you want to “measure”, so which results you would like to get and work on the analysis. Do the analysis and make your figures. Write on the figures your interpretation of your results. You may write your interpretation of the results by hand on the hardcopy of your results. Since we had meanwhile our inclass work on Tue, April 4, and since the deadline for HW 17 got extended, this homework includes that you work on the formatting of the figures, i.e. on the criteria practiced in class (large axes-labels, thick tick marks etc.).

**HW 18 (due Sa, Apr. 8, 5pm): Final Program:**

Revise your program using my comments to your previous version of your main project program. Your revised version will have to be the complete program. Use all of my comments in your program, they are the guidelines for expectations specific to your project. And read also this footnote.<sup>31</sup>

Put your program(s) into your ~/share.dir/ and give afterwards read permission, for example with

```
chmod a+r ~/share.dir/*
```

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<sup>30</sup>Katie: You might want to determine for example the mean squared displacement and make a figure of this mean squared displacement. Narayan and Rajasri: In your case you might want bifurcation diagrams and possibly different bifurcation diagrams for different parameter sets, or Rajasri in your case you might need additional analysis to determine first the period and only afterwards the bifurcation diagram.

<sup>31</sup>The complexity of the projects vary. In some cases the analysis needs to be part of your final program: Narayan and Rajasri, your final program (or one of your programs) should be for determining a bifurcation diagram or equivalent. Houtan and Jonathan, in your case getting a running program will be sufficient. Jonathan in your case you may simplify the Oxygen-distribution task. Katie you should aim for the mean squared displacement for the results, but the msd is not required for your final program. Connor, getting your program to run will be sufficient for your final program. Alex, see my comment at the end of your program what your final program should include. (Further analysis in your case, needed for the results, would mean an additional loop, e.g. over your initial N, or changes of rules.) Luke, in your case the final program is sufficient if it prints for example some of your variables as function of time. CJ, in your case the final program is sufficient if it prints  $R(t)$  etc. Ziqi, in your case the running program with for example the number of mysids in each cell as function of time is sufficient for the final program. Please ask me in class, you might want to make a space-time diagram.

## Future:

- April 6, Thu: Class cancelled. I will be out of town. We will make up this class April 12, 1 – 3.
- **April 7, Fr: Figures & Interpretation due**
- April 7, Fr: I will be back in town later this afternoon. Office hours for Fr, April 7, will be changed to Mo Apr. 10, 1-3pm . If I am back on campus early enough, also office hours Fr, April 7, 3-4pm (stay tuned).
- **April 8, Sa: Final Program due**
- April 10, Mo: make up office hours 1-3pm
- April 11, Tu: class as usual, inclass topic is traffic flow
- April 12, Wed, 1-3: make-up class in ACWS 204 (maybe also additional office hours in morning)
- **April 12, Wed, 5pm Results section of second main project paper due**
- April 13, Thu regular class, inclass topic traffic flow
- **April 14, Fr, 5pm Abstract of second main project paper due** (abstract will be in pamphlet for symposium talks)
- April 18, Tue, regular class, inclass topic Mini-Project III about traffic flow