

## CmpE49G - Project 4

### Cellular Automata Simulations

**Due Date: 2021.01.17 (Sunday) @ 23:59**

This project will be a flexible one, i.e., you will select the subtopic under cellular automata topic. You may refer to the resources of the 8<sup>th</sup> week. You are expected to include at least two research topics from literature or your own ideas. For some of the research topics, you may refer to the 7<sup>th</sup> slide of the presentation: Different state set, Probabilistic behavior/function, State history, Moving cells, non-rectangular grid. This project requires researching the literature for getting some inspiration. If you may find a physical phenomenon related to your cellular automata (as in the case of Game of Life or Sugarscape) that would be better. Timeline will be as follows:

- 2021.01.09 (Saturday) you should register your topic, title, and a short abstract of your work by sending an email. In the email, you should also mention a bit about the cellular automata details.
- 2021.01.17 (Sunday) you should submit the report via Moodle
- 2021.01.20 (Wednesday-lecture) you need to present the study in approx. 20 minutes. Presentation should include very short introduction (at most 2 slides). You should mainly focus on explaining your model and simulation results.

#### Submission:

- You need to submit a **pdf file** with the name <stuID\_prj4\_name\_surname\_report.pdf>. Report should have
  - An introduction section (between 1 and 2 pages),
  - System model section
  - Numerical Results & Discussion (for each plot you should give the system parameters in the caption)
- You may use **any** programming language, but I suggest Processing P3.

#### Important:

- You need write the report with **your own words**. You may read and get inspired from articles and/or internet, but you have to write your report with your own words.
- You have to cite your sources.
- For turnitin assignments, you will be able to see similarity score for your submission few minutes after you submit it. If you are not happy with the similarity score, you may resubmit 3 times. If you use your own words, the similarity score would be less than 20%. I will be checking your similarity scores; they should be less than 35%, otherwise you will get penalty on your scores.