

Computational Models - aanbod sessie B

Project description

Students should complete a project in groups of two for this course. For this project, they first of all have to select a specific model of a natural or biological process from literature. This should involve a spatially explicit model of the type seen in the course: a cellular automata, a coupled map lattice an agent-based model, an individual-based model, etc.. When selecting a model, students should carefully check whether the chosen article mentions all model parameter values and initial and boundary conditions.

The following steps should be completed for the selected model.

1. Send the article containing the selected model to aisling.daly@ugent.be and jan.baetens@ugent.be for final approval. **Deadline: May 13, 2022.**
2. Compile a properly structured scientific report containing the following:
 - (a) Description of the modelled process(es), model equation(s) and parameter(s),...
 - (b) Detailed description of the applied algorithm. Use a sketch, pseudo-code, the ODD protocol, etc. ...
 - (c) Simulation results for the benchmark scenario confirming the results reported in the selected paper.
 - (d) Scenario analysis covering different real-world scenarios that can be studied by changing parameter values, incorporating additional sub-models and/or changing boundary and initial conditions.
3. The report on the model should be **submitted by June 17, 2022** together with the code that is needed to reproduce the reported results. Submission is through Ufora (Collaboration space).
4. Results should be presented to the lecturers and fellow students on **the morning of June 23, 2022 (10:00 - 12:00).**
5. The presentation may take at most 15 minutes, and will be followed by a round of questions and remarks from your fellow students, the lecturers and department staff.
6. Every group will be assigned another group whose report they have to review and grade, and likewise their presentation. They should also participate actively in the questioning of that group. Group assignments are listed below.

Good luck!

Jan M. Baetens
Aisling Daly

Name	Group	Group to evaluate
Bonte, Olivier	1	5
Lozie, Hannah	1	5
Wouters, Dries	2	3
Dragers, Marnik	2	3
Geysen, Jonas	3	4
Pierre, Hanne	3	4
Jaspaert, Hanna	4	2
Demuynck, Wolf	4	2
Van Damme, Menno	5	1
Van Laere, Yari	5	1