CSYS5010 Introduction to Complex Systems
Assessment 1 – Article Review
Review of a paper using agent-based modelling

Due date: Friday August 17 2018, 5pm. (end of week 3)
Submit via: *Assignment 1* section on our Canvas site
Weighting: 10% of final mark
Length: 500 words max. (*hard limit – you will be penalised for exceeding!*)
Format: Please use 1.5 line spacing, 12 point font.

We have discussed complex systems modelling, and begun to examine how to build and use agent-based models.

Your task is to select a peer-reviewed journal or conference article which uses an agent-based model of a complex system. *Describe* **the model and** *critically evaluate* **the application of this model to study the complex system. Please provide:**

- A full citation to the article (in any standard citation format).
- A concise summary of the article:
  - Indicate the problem the article is trying to address;
  - Outline the main argument for how they address that problem;
  - Identify aspects of the modelling loop in their work (i.e. the system the authors are attempting to model, assumptions and rules they inferred regarding the system, their hypothesis, experiment and validation technique);
  - Identify the authors' results and conclusions.
- A critical review of the article. Remember that a critical review does not mean you need to focus on negative points, but that you need to give an original, informed evaluation; potentially including:
  - Strengths and weaknesses of the modelling approach used, experiment and conclusions;
  - Applicability to the domain of study and impact/significance of the findings;
  - Any other aspects you think are relevant (e.g. see suggestions in the linked articles below).

Finally: there are many, many examples of using agent-based models available in the literature. You would be best served to find a good article which makes explicit many steps in the modelling loop, and focussing on a study in a domain with which you are familiar.

Some general suggestions regarding writing annotated bibliographies and critical reviews are available at:
1. https://student.unsw.edu.au/annotated-bibliography and
2. https://student.unsw.edu.au/writing-critical-review

Notes on applicable policies:

This assignment will be submitted via TurnItIn, a text-matching tool used to help detect instances of academic dishonesty. You must have accepted the policy via the Academic Honesty Quiz in order for your assignment to be marked. For more detail about TurnItIn and the Academic Honesty Policy, please see the Canvas site.

Please see the Canvas site regarding the late submissions policy.

Assessment 1 Rubric

Criteria	Pass	Credit	Distinction	High distinction
Correct citation and summary of article. Summary includes problem description, argument, aspects of modelling loop, results and conclusions	Mostly correctly formatted citations. Emerging concise views of the work indicating a limited understanding.	Complete correctly formatted citation. Evidence of concise views of the work.	Complete correctly formatted citation. Concise views of the work (within word limit), and indications of a deeper understanding of the principles involved.	As for distinction, plus original insights into the work in the article.
Critical evaluation of the article	Limited understanding of the strengths and weaknesses of the study.	Demonstrated understanding of the strengths and weaknesses of the study, and some indication of impact/significance to the field of study.	An integrated understanding of the strengths, weaknesses, strengths/impact of the modelling approach. Within word limit	As for distinction, plus original insights into the work in the article and evidence of ability to extend/further develop ideas in the article.