



**CAA 2016**  
OSLO 29. March – 2. April

# Agent-based modelling for archaeologists

*free 2 days workshop at the CAA2016*

*Oslo, Norway 28-29 March 2016*

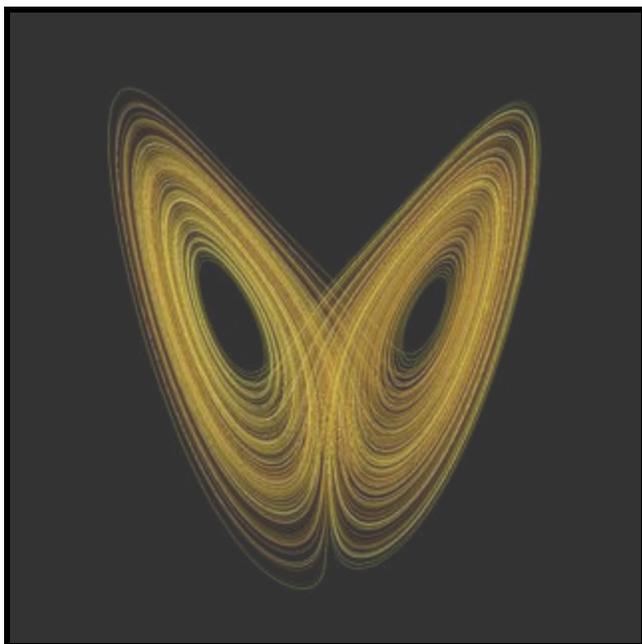


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## Agent-based modelling in archaeology

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Agent-based modelling (ABM) has taken by storm disciplines from all corners of the scientific spectrum, from ecology to transport and social sciences and it is becoming increasingly popular in archaeology. **Now it is your turn to give it go!** Learn how to use the simulation software and explore how this popular complexity science technique can complement your research. This two-day workshop will provide **an introduction to ABM using NetLogo** - an open-source platform for building agent-based models, which combines **user-friendly interface, simple coding language** and a **vast library of model examples**, making it an ideal starting point for entry-level agent-based modellers, as well as a useful prototyping tool for more experienced programmers.



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**Attempts at quantification and simulation modelling appear essential. It is striking that such methods play a central role in other disciplines dealing with long term change (...) but have been neglected in palaeoanthropology.**

- Mithen & Reed 2002

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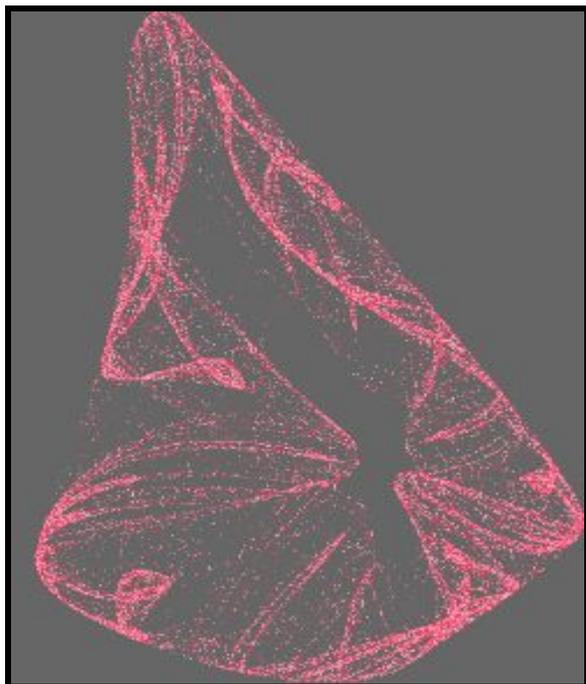
## If you are:

an undergraduate, master or PhD student in archaeology, anthropology, history or a similar subject, an early career researcher, a lecturer, a commercial archaeologists or a heritage specialist

## and if

- you are interested in computational modelling and simulations, or
- you work on a complex problem which can only be solved by modelling, or
- your supervisor told you to 'go an learn how to do simulations', or
- your students seem to be doing some magic with computers and you want to help them but don't know the tools, or
- you have once heard of agent-based modelling so you want to check what is the whole fuss about, then

this workshop is for you!



## What will you learn?

- the theory and practice of agent-based modelling;
- how to create an archaeological simulation;
- basic and intermediate programming skills in NetLogo;
- the modelling process, from finding the right research questions to publishing your groundbreaking results;
- how to make your code better, clearer and faster;
- NetLogo extensions incorporating GIS, network science, and stats.

*Coding experience is NOT required.  
You need to bring your own laptop.*

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## Teachers

Iza Romanowska, Ben Davies, Stefani Crabtree, Colin Wren, Juan Barceló, Tom Brughmans, Xavier Vila, Francesc Miguel Quesada, Florencia del Castillo

### Day 1 - morning session

- Introduction to modelling: what is a simulation?
- First Steps in NetLogo: hands-on tutorial in basic NetLogo.

### Day 1 - afternoon session

- Learning to walk in NetLogo: local and global variables, loops control statements, lists;
- Group exercise: build your own archaeological simulation;
- Drop-in session: consultations with a modeller.

### Day 2 - morning session

- Model development step by step: finding research questions, defining the ontology, coding, testing, parameterisation, experiment design, dissemination;
- NetLogo extensions: GIS, networks, profiler, Behavioural Space;

### Day 2 - afternoon session

- Dealing with the results. Data analysis and interpretation.
- Where to go from here? Resources for modellers.

*To secure a place please send an email to [i.romanowska@soton.ac.uk](mailto:i.romanowska@soton.ac.uk) expressing your interest and briefly describing your background and the reasons why you want to attend. The event is **free of charge**, but you need to register to the CAA conference. Please note that places are limited and early applications will be given preference.*

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