# SimulPast Workshop

# How wrong is my model? Empirical Challenges in Archaeology, History, and Anthropology



# 24th – 26th May 2016 -Barcelona

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# **Abstracts · Programme · Venue**

#### Aim

The last decade saw a rapid growth of quantitative and computational methods apt to analyse long-term cultural and biological processes. In particular, the wide diffusion of agent-based simulation platforms and the enhanced accessibility of computer-intensive statistical analyses are offering the possibility to replace explanations based on natural language with formal models.

While these advances are providing powerful tools that are enabling us to tackle old and new research questions, their use is rarely coupled with appropriate epistemological discussions on how to ultimately relate the model to the data. Problems such as the choice of an appropriate statistic describing the empirical record, the balance between parsimony, complexity, and goodnessof-fit, the integration of taphonomic and sampling biases, or the inferential framework for selecting or rejecting alternative hypotheses rarely occupy the spotlight. In the case of simulation models, discussions are often limited to the model-building stage, and comparisons between prediction and observation are too often qualitative and not supported by sufficient statistical rigour. Yet this is the fundamental step that enables us to evaluate our models. In historical sciences, where the challenges imposed by the nature and the quality of our samples is at its greatest, this issue deserves more discussions and solutions. We believe that this is a critical issue that transcends the specific used in each discipline and cannot be dismissed as a challenge for statisticians.

We invite experts at different stage of this endeavour, sharing the same challenge of evaluating archaeological, historical, and anthropological model to the empirical evidence. We welcome the widest range of expertise (e.g. agent-based simulation, phylogenetics, network analysis, Bayesian inference, etc.) in order to promote the crossfertilisation of techniques, as well as to engage into deeper theoretical and methodological discussions that transcends the specific of a given geographical and historical context. Participants will present examples showcasing problems (and solutions) on a variety of topics, including: uncertainty in the observed data, parameter search and estimation, model reusability and reproducibility, and more broadly applications of hypothesis testing and model-comparison frameworks in archaeology, anthropology, and history.

## Call For Papers

Abstract Deadline: **25th April 2016**Abstract Length: max 300 words
Please submit via email to the address
simulpast@gmail.com with the subject: "WK-Empirical Challenge"

#### **Tickets**

The event is free for everyone (including non-speakers), but given the limited number of places please get your ticket here.

The workshop is sponsored by the Simulpast project.

#### **Contact**

For info and enquiries please contact us on simulpast@gmail.com

More details on the event will be posted soon.

### **Organisers**

- Enrico Crema (McDonald Institute for Archaeological Research, University of Cambridge)
- Xavier Rubio-Campillo (Barcelona Supercomputing Centre)

## **Co-Organisers**

- Debora Zurro (Institució Milà i Fontanals CSIC)
- Jorge Caro (Institució Milà i Fontanals CSIC)
- Marco Madella (Universitat Pompeu Fabra/Institució Milà i Fontanals – CSIC/ICREA)

## **Invited Speakers**

- M Jane Bunting (University of Hull)
- Daniel García Rivero (Department of Prehistory and Archaeology. University of Seville, Spain)
- Anne Kandler (City University London, UK)
- Alex Mesoudi (University of Exeter, UK)
- Luca Pagani (Department of Archaeology and Anthropology, University of Cambridge, UK)
- Marko Porčić (Department of Archaeology, University of Belgrade, Serbia)
- Fabio Silva (IPHES Institut Català de Palaeocologia Humana i Evolució Social, Spain)
- Adrian Timpson (Department of Genetics, Evolution and Environment, University College London, UK)

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