

Digital Archaeoludology

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Digital Archaeoludology

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Track S38: Artificial Intelligence in Archaeology and Cultural Heritage

All humans play and all human cultures have their particular games; games are an important part of our cultural heritage. But while there is much tangible archaeological evidence of ancient games, the rules for how these games were played is typically lost. Our understanding of ancient and early games is incomplete and based on often unreliable interpretations of partial evidence, leaving huge gaps in our knowledge about them.

There is a wealth of traditional game studies from historical, anthropological, archaeological, ethnological and cultural perspectives. There is also a wealth of computational game studies, and Game AI is now maturing as a research field in its own right. However, there has been to date little overlap between computational and historical studies of games.

The Digital Ludeme Project (<http://ludem.eu>), a five-year ERC-funded research project recently launched at Maastricht University, aims to address this gap by:

- 1) Modelling the full range of traditional games in a single, playable digital database.
- 2) Reconstructing missing knowledge about traditional games with unprecedented mathematical rigour.
- 3) Mapping the development of traditional games and explore their role in the development of human culture and the spread of mathematical ideas.

This project will produce a “family tree” of the world’s traditional games, with which the dispersal of games and related mathematical ideas might be traced throughout recorded history. This will pioneer a new field of study called Digital Archaeoludology (DA) which involves the use of modern computational techniques for the analysis and reconstruction of traditional games from incomplete descriptions, to provide new tools and techniques for improving our understanding of their development.