Session Proposal

European Association of Archaeologists (EAA) 12th Annual Meeting
Krakow, Poland
19th to 24th September 2006

Organizer: Benjamin Ducke

Theme:

Archaeology in the Modern World: theoretical and Methodological Perspectives

Session Title:

Quantitative Archaeology and Advanced Archaeological Computing

Abstract:

Scientific progress in archaeology -- just like any other discipline -- requires building abstract, generalised and transferable knowledge about the processes that underlie past human actions and their manifestations. Quantifications provide the ultimate known way of abstracting and extending our scientific abilities past the limits of intuitive cognition.

Quantitative approaches to archaeological information handling and inference constitute a critical body of scientific methods in archaeological research. They provide us with the tools -- mathematics, statistics and computer programs -- to process information too voluminous or complex for purely cognitive, informal inference. They also link archaeology with numerous other sciences such as geophysics, geoinformation sciences and applied statistics. And they allow us to design and carry out research in a formal, transparent and plausible way.

Strangely enough, despite its evident progress and usefulness, today's quantitative archaeology seems inadequately represented in archaeological training and education. Part of this problem are misconceptions about the seeming conflict between mathematics and humanistic archaeology, but also a tendency of "quantitative archaeologists" to stay among themselves and failure to advertise their objectives and successes.

Without a doubt then, it is time to attempt a renewed appreciation of the current state of quantitative methods in archaeology and make the topic more accessible to the archaeological community. In the digital age, this must necessarily include a look at how modern computer technology is supporting -- or rather enabling -- advances in fundamental archaeological research.

This session cannot, and will not even attempt to, cover the full scope of current quantitative archaeology and computing applications. Rather, it will present papers that focus on demonstrating how quantitative approaches based on advanced computing methods can be used with success to solve fundamental issues of archaeological information retrival, analysis and inference.

Papers in this session will combine theory and application of modern, computer-based quantitative archaeology, covering aspects of quantifying and analysing archaeological phenomena, advancing and teaching quantitative methods on a variety of scales ranging from artefact analysis to landscape archaeology.

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