

SESSION TITLE: **Archaeological Science in the 21st Century – Case Studies from Italy**

ORGANISER: Keri Brown (*UK*)

SESSION PROPOSAL:

Archaeological science is making an increasingly important contribution to our understanding of the past. New data from such methods as ancient DNA, stable isotopes and strontium, oxygen and sulphur isotopes can shed light on social organisation, diet and migration. Alternative dating methods to radiocarbon dating can be used where organic material is scarce or non-existent. Aerial photography and remote sensing can reveal new sites and details of sites already located. Ground penetrating radar can be used to discover underground anomalies. Computer modelling is becoming increasingly used. Not forgetting, in the year marking the 200th anniversary of Darwin's birth and the 150th anniversary of the publication of 'On The Origin of Species', the application of evolutionary theory in archaeology. These are just a few examples out of a wide range of methods used in today's scientific archaeology.

The potential of archaeological science can only be met if the hypotheses that it is used to test are embedded within the mainstream of archaeological research. Archaeological science is not an end in itself: results must always be placed in an archaeological context and their implications for archaeological interpretations considered. In this session we will explore these challenges for archaeological science, using Italy as the model. Italian prehistory has a huge wealth of material evidence which could and is being analysed using the wide repertoire of scientific applications now available. The session will give examples of the use of scientific methodologies to address different areas of Italian prehistory, but this will not simply involve a dry description of data. Instead the session aims to emphasise the important, even revolutionary, impact that archaeological science and new methodologies has had on the discipline in recent years and to make non-scientific archaeologists aware of the repertoire of scientific applications available today.

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