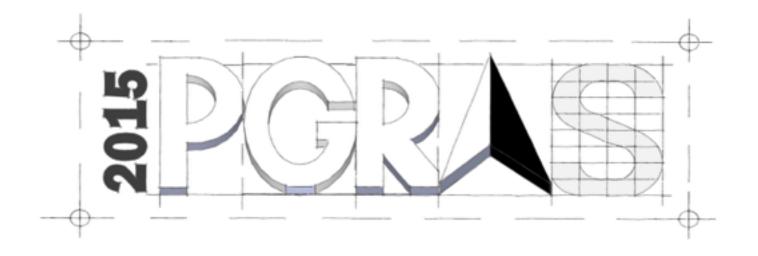




# POST-GRADUATE RESEARCH ARCHAEOLOGY SYMPOSIUM

20 - 21 MAY 2015

Southampton



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20 - 21 MAY 2015 Lecture Theatre B Building 65





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# Session 1: Nobody Puts Theory in the Corner Chair: Kate Rogers

#### **Daniel Hunt**

#### A Deep History of Emotion: An Interpretative Framework

Supervisors: Professor Clive Gamble

Day 1 - 09:25

That emotions have changed during human evolution should be axiomatic. Non-human animals appear to have emotions, at least in a manner of speaking, whilst the human emotional experience is vastly more sophisticated, both behaviourally and cognitively. The change from basic mammalian emotions to the complexity and cultural variability seen in modern humans speaks of a change that must have occurred during human evolution.

Here, I will develop an interpretive framework for the study of emotion within Palaeolithic archaeology. Emotions are commonly understood as distinct categories of subjective experience, with evolutionary approaches attempting to find adaptive scenarios for these discrete units. However, this is not how emotions work. Instead, It will be argued that emotions should be understood from a psychological constructionist perspective, with a small number of discrete neural mechanisms lending affective feeling to higher levels of cognition, and producing subjective experience.

As such, an evolutionary account of emotion will need to present a model of dynamic change in emotion cognition. Such a model will be drawn from child development, showing that emotion cognition is intricately related to both broader cognitive milestones and life history patterns. Using palaeoanthropological data, the relationship between life history and cognition will be explored in the context of human evolution. This will provide a platform from which to develop new interpretation of the Palaeolithic record.

Keywords: emotion, palaeolithic, social, human origins

#### Cory Cuthbertson

# The Effect of Teaching on Assemblage Variability and its Implications for Assessing Palaeolithic Cognition

Supervisors: Professor Clive Gamble

Day 1 - 09:40

The origin of language has long been explored through the presence of material culture with purported symbolic meaning, which is untestable and unscientific. I develop a new way of empirically testing indications of linguistic behaviour by identifying a correlate cognitive ability, theory of mind, which might be better identified in Palaeolithic material culture. Levels of theory of mind are differentially required for different cultural transmission methods. The identification of teaching or imitation in lithic technology will therefore indicate a certain level of theory of mind ability, which will in turn indicate a certain level of linguistic ability. In my recent pilot study (April 2015), I taught four groups of participants to make hand axes by four different types of cultural transmission methods (emulation, imitation, silent teaching and verbal teaching). I will share preliminary results comparing the variability of morphometrics of these groups, to see if different transmission methods might be indicated in the relative variability or standardisation of tools as an effect to their different access to the knowledge states of the model/ teacher. Recognising the different assemblage-wide signatures of cultural transmission methods will aid in identifying them Palaeolithically. I will then outline changes I will make to the forthcoming main study.

Keywords: palaeolithic, cognition, theory of mind, language, experimental, knapping

#### **Merlin Evans**

#### What Does it Mean to Ask What it Means to Be Human?: Human Origins and Anthropocentrism

Supervisors: Professor Yannis Hamilakis, Professor Clive Gamble

Day 1 - 09:55

Anthropocentrism can be defined as a philosophy placing humans at the apex of a hierarchy of life, a superior status conferred by possession of attributes all other beings (are held to) lack. This ideology, going back to classical concepts of human and animal nature, has been central to western thought and politics, and has been a focus of critical analysis in recent times.

Despite growing discussion in fields such as philosophy, ethology, and anthropology, it has barely begun to be recognised within archaeology. While anthropocentrism influences all fields of archaeology, it is in the study of human origins that it is most notable and has the greatest impact. Here, defining the human is an explicit aim and topic of debate.

How the humanity/animality of human ancestors has been defined and represented in human origins discourse is thus a subject in need of serious study. Such a study would document the interplay of science and politics in the influence of inherited concepts and contemporary concerns upon conceptions of humanity/animality in prehistoric archaeology, and how the power of archaeological narratives and representations in public media in turn influenced/supported contemporary concepts of humanity/animality.

The outcome of such research would be an original contribution to the history of archaeology and socio-politics of the past, which will support new ways of thinking about humanity/animality in the past and present.

Keywords: human origins, animal studies, anthropocentrism, history of archaeology, archaeological theory

### Session 2: Innovation On My Mind Chair: Rodrigo Ortiz-Vázquez

#### **Helen Chittock**

'Novelty and Innovation': What Motivated the Designers of Early Celtic Art?

Supervisors: Dr Andy Jones, Dr Josh Pollard

Day 1 - 10:30

The phrase 'Early Celtic Art' describes a varied group of bronze and gold objects, found across Middle-Late Iron Age Europe and united by swirling La Tène style decoration. Many successive archaeologists have considered the purposes and effects of these art objects and the motivations that drove those who designed and produced them. Interpretations of the social roles of these objects have traditionally centred on status and have fed into hierarchical conceptions of Iron Age society.

Recent explanations for the motivation behind the designers of Early Celtic Art have focussed more on the objects themselves. Duncan Garrow et al. have suggested that Early Celtic Art from Britain is derived on a concern for quality, as opposed to the importance of quantity that governed the production of metal objects during the Late Bronze Age. Support for this assertion comes from the lack of standardised forms during the Iron Age, the 'complex histories' of some objects and a 'marked emphasis on novelty and innovation' (Garrow et al. 2009: 111).

This paper will further investigate this argument at a higher resolution, focussing on East Yorkshire. Data on material culture dating to 400BC-AD100 has been compiled from the British Museum, Portable Antiquities Scheme, Archaeology Data Service and Published Volumes. By looking at the decoration present on all the metalwork items within this dataset and by contextualising these objects among those of other materials, the argument that the motivations behind producing Early Celtic Art objects were, in fact, multiple, varied and complex will be put forward.

Keywords: art, design, innovation, social relations

#### **Robert MacKintosh**

Is the 2001 UNESCO Convention on the Protection of Underwater Cultural Heritage Effective?

Supervisors: Dr Lucy Blue, Professor Filippo Lorenzon

Day 1 - 10:45

The 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage is the first multilateral international treaty created solely to protect underwater cultural heritage. It has gathered momentum after coming in to force in 2009, with 50 states having now ratified or accepted it.

Most of the analyses of the Convention to date have been from a purely legal perspective and have invariably used a 'top down' approach, studying the wording of the convention itself, the negotiating process behind it, and its relationship to other international laws. Very little is known about how it is working in practice. This study will therefore takes a 'bottom up' approach, identifying how it is being implemented in the states which have ratified it, how it affects the work of archaeologists in those states, and whether it is succeeding in protecting the underwater cultural heritage itself.

This presentation will discuss the results of the study so far. This includes a review of all the relevant legislation of the Convention's States Parties, to see what legal changes the Convention has prompted, and a recently completed survey that asked archaeologists and heritage managers in the States Parties whether they thought the Convention had altered archaeological practice and whether underwater heritage is better protected as a result.

Keywords: heritage management, international law, UNESCO, underwater cultural heritage

#### Crystal El Safadi

#### The Maritime World of the Early Bronze Age Levant Through Time and Space

Supervisors: Dr Fraser Sturt, Dr Lucy Blue

Day 1 - 11:00

Urbanism, social complexity, centralisation and integration are all terms profusely used to describe the Early Bronze Age (EBA) in the Levant. This chronological period (c. 3600 BC to 2000 BC), is recognised for marking the first urban period in the southern Levant, and the 'second urban revolution' in the northern Levant. It is characterised by significant changes, primarily a shift from village-like communities towards an urban mode of life. The Levantine littoral, particularly in the north, is known to have played a major role during the mid-third millennium, when maritime connections mainly with Egypt became vital. This has been considered one of the instigators of urban development. However, numerous hypotheses have attempted to explain the rise of social complexity and urbanism, yet most of these failed to consider the totality of the space over which change is occurring, and appraise the Levantine littoral in its full potentiality, as a seamless space of sea and land. Archaeological studies of the Levantine littoral are generally percolated with a generic lack of emphasis on the significance and qualities of the maritime space.

This research aims to study the maritime world during the Early Bronze Age, in its large scale and local scale manifestations on the Levantine littoral, and to evaluate its role/relationship in the emergence of complex societies and urbanisation during the EBA. A consolidation and appraisal of the available data, as well as a time-space analysis of the maritime accessibility and connectivity of the Levantine coast are paramount to this research. This presentation will give an overview of the research, approach, methods, and data.

Keywords: complex society, maritime connectivity, early bronze age, Levant, time-space, GIS

#### **Kate Rogers**

#### Pulling Focus: Uncovering the Real Secret Lost Truth about Archaeology Documentaries

Supervisors: Professor Yannis Hamilakis, Professor Stephanie Moser

Day 1 - 11:15

Archaeologists are storytellers. We tell stories about where we come from, why things have changed, and how we came to be who we are. Our most promising means of storytelling is the archaeology documentary and yet - despite repeatedly proving to be the most popular way for the public to access the material past - informed scholarly discourse on archaeology documentaries is notable only for its absence. This is surprising given the long and impressive history of archaeologists doubling as documentary presenters, producers and filmmakers of diverse and significant productions. All of which raises the questions: have we forgotten our audience? Have we lost the plot in our own story? Ultimately: who are we *really* doing archaeology for?

This research has two parts: the first part seeks to define the archaeology documentary by mapping out and contextualising for the first time the history and theory underpinning the genre, from the earliest newsreels to digital multi-platform documentaries. The second part explores that theory in practise, as applied to the 2015 excavation at Koutroulou Magoula, a neolithic tell site in central Greece. By making a documentary about this excavation and by critically reflecting on the process of filmmaking as part of the practise of archaeology, I aim to move the conversation beyond retrospective debates about archaeological representation on film, and towards a discourse about how archaeologist's can proactively use documentary storytelling in order to create a shared public space for interrogating and reflecting upon archaeological epistemologies and ontologies.

The truth is: if archaeologists don't tell our own story, someone else will. We better make it a good one.

Keywords: public archaeology, documentary, ethnographic film, sensorial archaeology, ethics

# Session 3: Off To Market! Chair: Katherine Crawford

#### **Geoff Taylor**

#### Where Did All the Coins Go?

Supervisors: Dr Louise Revell, Professor Graeme Earle

Day 1 - 11:50

It is often said that the Romans brought their market economy to Britain but that it took hold and spread only gradually. It is also suggested that the use of money for exchange never reached some remote rural areas. Looking just at Hampshire, whether this was the case might be seen by mapping all the Roman coins found across the county. Analysis might then be able to look more closely at the mechanisms that introduced the use of money to the population, the vast majority of whom were native people living in the countryside. For example, did the use of coinage spread from towns, villas or along the roads?

One problem is that the first two centuries of Roman occupation of Britain was also the last two centuries of the 'stable *denarius* period'. A coin minted in the reign of Claudius could, in theory at least, have still been in circulation 200 years later. This presentation considers how this problem might be overcome and provides preliminary results of mapping and analysing the spread of Roman coinage across Hampshire.

Keywords: Roman, market economy, coins, distribution, countryside.

#### Roberta Cascino

# Geographical and Historical Background on Ager Veientanus Preliminary Data on South Etruria Survey Materials

Supervisors: Professor Simon Keay

Day 1 - 12:05

My research aims to answer questions about the nature of trade and commerce in the hinterland of Rome using archaeological materials. I have chosen to deal with the strip of land that extends between the Tyrrhenian coast and Rome. This area corresponds to the ancient Ager Veientanus (the territory dominated by Etruscan Veii). Regarding the chronology, I will focus my study on the period between the 7th c. BC and the 3rd c. BC.

During the first year of my PhD, I have focused my attention upon reconstructing the geographical and historical background of the area.

I have also defined the amount of the archaeological material useful for my topic. It will be essentially pottery from various archaeological survey contexts, either published or unpublished.

With regard to the latter, my study will start from the pottery collected during the South Etruria Survey by John Ward-Perkins between the 1950s and 1970s, and stored at the British School at Rome. This survey covered a large part of the Rome's hinterland and collected a huge quantity of varied archeological material dating from prehistory to the early modern period.

I will present some preliminary data deriving from the study of a selected number of settlements identified during the Ward-Perkins Survey.

Keywords: landscape, trade and commerce, pottery

#### **Emilia Mataix Ferrándiz**

Ubi societas, ibi ius: Reviewing the Epigraphy of Merchandise from the Legal Perspective

Supervisors: Professor Simon Keay, Dr Dragana Mladenović

Day 1 - 12:20

My PhD is focused on the study of the inscriptions that I can find in the commercial items (amphorae, barrels, ingots, etc). These can provide important information towards understanding the roles of the individual subjects or societies who were directly performing the commercial operations (mercator, negotiator, exercitor, praepositus etc), and the ones who are intervening in one way or another in those activities (magister navis, mensor, publicanus etc). To know who is who in the trading procedures helps us to understand the duties and responsibilities of each of the subjects, the complexity of the trading procedures, and the organisation of a port.

The inscriptions written on objects of commerce (amphorae, sacks, ingots, barrels, metal bars) had a practical purpose. The aim was to reflect the characteristics of the item, relate it to the person responsible for it, and in some cases, to show that the merchandise has followed the appropriate and mandatory control procedures. Through other related sources and the prosopography available, I will try to reconstruct the story of the item and of the subjects involved with it. To sum up, I can say that my project will be to trace the itineraries and mechanisms of the ancient Roman commerce through the evidence of the inscriptions.

Keywords: Portus Limen, epigraphy, law, commerce, trade

#### **Ammandeep Kaur Mahal**

**England and the Atlantic World: 17th Century Maritime Expansion** 

Supervisors: Professor Jon Adams

Day 1 - 12:35

At the dawn of the modern era England fell behind other powers, principally Spain and Portugal, in its efforts to establish a colonial presence in northern America. England finally did so in 1607 and, though this success took place after that of other European powers, it has been considered by many to be the most interesting chapter in the history of the early 17<sup>th</sup> century. The main proponent of this settlement was the Virginia Company of London, later known as the Somers' Isles Company.

One of the ways in which we are able to understand this process of expansion is through written sources, such as the royal charters issued to adventurers and trading companies and correspondence between the various institutions and principal agents involved. However, as this process was primarily a maritime one, an alternative source of information is shipwreck data. One place that relevant data survives is Bermuda, a place that became English after the accidental stranding of *Sea Venture* on its reefs in 1609. Bermuda's location ensured its rapid establishment as a colony in 1612. As a result of which it became of central importance to the establishment of the English Atlantic world.

This presentation is the subject of my PhD research. I aim to study the shipwrecks, and detail the ways in which a study of their technology and cargoes can be used, to shed more light on the process of early English maritime expansion.

Keywords: ship technology, expansion, colonisation, trade, English Atlantic world

#### **Katharine Hoare**

#### The Appropriation of Egyptian Obelisks in Imperial Rome

Supervisors: Professor Stephanie Moser, Dr Andy Jones

Day 1 - 12:50

Re-use of ancient Egyptian architectural styles outside Egypt began in the time of the pharaohs and continues to the present day. The style draws on the structures, elements and motifs of ancient Egypt and has been used at different times in many places around the world. The style can involve the use of authentic pieces of ancient Egyptian material culture as well as replica/pastiche pieces. The style is selected and deployed in order to create a cultural object which has meaning for the contemporary social world. This appropriation takes place within a social world context informed by contemporary perceptions of ancient Egypt and shaped by the social, political and economic factors affecting that world.

One approach to understanding the use of the Egyptian style is by using an analytical framework which draws on reception theory to analyse the cultural objects, producers, receivers and the social world of a particular revival period. The historical context for my chosen revival period is imperial Rome whereby I will be taking the Egyptian obelisk as the cultural object appropriated by the Roman emperors (the producers) for display in the city of Rome (the social world) before the city's population (the receivers).

Keywords: reception theory, cultural appropriation, ancient Egyptian obelisks, Imperial Rome



# Session 4: "Echoes" of Life Chair: Stephanie Wright

#### Chiara Botturi

Connecting "Spaces of Life" and "Spaces of Death": A New Approach for the Understanding of Roman Rural Landscape

Supervisors: Professor Simon Keay, Dr Dragana Mladenović

Day 1 - 14:00

Roman funerary remains, in addition to being informative about ideological issues, are of crucial importance to understand aspects related to the perception and organisation of space. The close relationship between "spaces of life" and "spaces of death" in Roman time, allows a new perspective on funerary remains that emphasises their role as primary sources of topographical information. In accordance with Roman law, cemeteries were generally located outside inhabited areas. However, they are commonly found in proximity to the "spaces of life", in particular along minor and major streets, a position that ensured the preservation of memory and the self-representation of individuals. Furthermore, the role of tomb as terminus (boundary marker) attested by Latin sources, led to the common location of funerary areas along property boundaries and limits of Roman rural division (centuriation). Therefore, my contribution aims at highlighting the heuristic potential of a combined study of these two types of evidence, funerary and non-funerary, for the holistic understanding of Roman rural landscape. The identification and positioning of cemeteries and single tombs is a decisive, and often unique, means to understand the distribution of streets, the nature and distribution of rural settlements, and the layout of the centuriation, as I will demonstrate with an example drawn from my case study (Chiese river basin, Brescia, Italy). The presentation puts forward a novel multidisciplinary methodology, which combines the distribution of funerary evidence with different topographical techniques, such as cartography, toponymy, epigraphy, archaeological and geomorphological study, GIS applications, and aerial and satellite images interpretation.

Keywords: landscape, funerary remains, Roman topography, multidisciplinary

#### Sarah Schwarz

Grave Ideas: Neanderthal approaches to Disposal of the Dead

Supervisors: Dr William Davies, Dr Sonia Zakrzewski

Day 1 - 14:15

Death is a natural and expected part of everyday life in every culture, from the initial responses of grief to the variable rituals. But why did these rituals first begin, and how did we become mourners? We often take for granted that we will be treated to a series of processes or rituals upon our death, and in today's society it is considered a right to have a 'decent' burial. But how did this attitude begin — could it perhaps be engrained in us from our earliest ancestors?

By examining the earliest burials we can begin to understand how we learned to mourn our dead, and why we developed a structured response to death in the form of mortuary practices. Therefore this paper looks not at the first Homo sapiens burial, but at what have been identified as the first Neanderthal burials.

Examining the cultural adaptations to death employed by our closest hominid cousins, we may begin to understand more clearly one of the factors which has been deemed to define our humanity – the ability to honour our dead. But were they even capable of a widespread and systematic response to death, and what does the archaeological record tell us about the variety of mortuary practices throughout the Neanderthal world?

Keywords: Neanderthal, mortuary practices, burial

#### **Chris Elmer**

#### Lego and Zombies: Competing Values at Basing House

Supervisors: Professor Stephanie Moser, Dr Josh Pollard

Day 1 - 14:30

In recent years there has been increased debate around the notion that public engagement in archaeology is vital to the health of society as well as the Profession. This debate has become even more relevant as funding cuts threaten the ability of organisations to offer public access to archaeology. This research focuses on the historic site of Basing House, near Basingstoke and examines its role in offering the public opportunities to engage with archaeology. An analysis of the 'Disciplinary' and 'Identity making' function of the site is being used to better understand the shifting values that accompany recent organisational change and to suggest why a range of attitudes and approaches to public engagement exist. Through a process of recurrent interviews with site staff, visitor meaning mapping and local community engagement projects, this study is beginning to reveal the tensions that accompany the provision of new approaches to heritage management and interpretation. This talk will examine some of these tensions, focussing on the staff interview data compiled over the course of the year and offer an assessment of why these tensions around our public heritage exist.

Keywords: public archaeology, local society, funding, heritage, interpretation, visitor sites

#### **Maria Cristina Biella**

#### Giving Voice to an Ancient Pre-Roman City: The Case of Falerii Veteres

Supervisors: Professor Simon Keay

Day 1 - 14:45

In the last thirty years a complex debate on the origin of cities in central pre-Roman Italy has taken place. Notwithstanding this, little attention has been given to their development and to their "forma urbis", by which I mean, for instance, how spaces were organised, what were the relations between public infrastructure and private properties and houses, where and how productive areas were settled, what were the relations between city centre and suburban and extra-urban areas.

All these questions cannot find clear and satisfactory answers without recourse to a large documentary basis, acquired thanks to wide archaeological excavations, field surveys and systematic studies of both material culture and historical sources. Unfortunately the majority of ancient cities in central pre-Roman Italy lack at least one (or all) of these aspects. The case study of *Falerii Veteres* must be considered an exception, because of the incredibly rich set of data.

The deep knowledge of this city in a wide chronological period with a holistic perspective must be considered the primary aim of my PhD project. In my paper I will present the state of things of my research. In the last two years, following the thorough collection of archival, topographical and historical data, I carried out an attempt to reconstruct the urban development of the city from the 8<sup>th</sup> BC to the Roman conquest and I compared from a structural point of view *Falerii* to other Etruscan cities (*Veii*, *Caere*, *Tarquinii* and *Volsinii* in primis).

Keywords: ancient urbanism, pre-Roman Italy, social and political change

### Session 5: Where in the World Are You?

Chair: Joana Valdez-Tullett

#### Iza Romanowska

#### **Computational Modelling of Long Distance Dispersals**

Supervisors: Professor Clive Gamble, Professor Seth Bullock, Dr Fraser Sturt

Day 1 - 15:20

The Variability Selection Hypothesis proposed by Potts (1996; 1998) postulates the evolution of behavioural plasticity among early hominins arising during periods of strong environmental fluctuations in the last 6 million years. It argues that the inconsistency in selection regimes caused by the rapid environmental fluctuations produced particularly strong selection pressure on adapting to change rather than any particular set of conditions (termed 'adaptive complexity', 'adaptive flexibility', 'adaptive versatility', or simply 'versatilists organisms'). The work by Potts was further formalised by Grove (2011) in a single locus model and tested on the temperature curve spanning the last five million years. The current implementation aims to assess the implications of the Variability Selection Hypothesis on the agent's ability to disperse, a process that is visible in the archaeological record. The model was translated into a stochastic multi-agent simulation to investigate the dynamics between individuals with different positions and range on the adaptative spectrum (including the 'versatilist' individuals) within a non-homogenous population. The initial results shows that using heterogeneous multi-agent simulation can successfully replicate Grove's formal implementation but also sheds new light on how the pattern of dispersal unravels under different environmental regimes.

Keywords: palaeolithic, computational modelling, dispersal, methodology, theory

#### Sam Griffiths

#### Neanderthal Occupation of the Channel Palin Region During the Early Middle Palaeolithic

Supervisors: Dr John McNabb

Day 1 - 15:35

The Early Middle Palaeolithic (EMP) is becoming an increasingly more intriguing period for Palaeolithic research and this is no different within the Channel Plain Region of Northern Europe. In this paper I will discuss Neanderthal behaviour within this region highlighting how a dynamic environment has influenced technological decision making. Specifically the rich archaeological collection recovered from La Cotte de St Brelade, Jersey. Using a lithic sample of > 6000 artefacts I have highlighted the technoeconomic signature of the lithic assemblage through the EMP c. 250~180kya throughout the Channel Plain. Raw material acquisition at La Cotte changes throughout Neanderthal occupation and ties directly to the climatic fluctuations we see in the quaternary record. These constraints have led to innovative but technologically consistent practices within lithic production. A developing knowledge of the immediate palaeolandscape and the regional landscape evolution of the Channel Plain have begun to show potential reasons behind this pattern and shed light on Neanderthal mobility, landscape use and subsistence behaviour for the region.

Keywords: lithics, technology, landscape, mobility

#### Patricia Jones

#### Were the North Downs of Kent a 'Refugia' for Neanderthals in Periods of Climactic Change?

Supervisors: Dr John McNabb, Dr William Davies

Day 1 - 15:50

Neanderthals were present in Europe approximately 250 000 to 30 000 years ago when parts of Europe, including Britain, experienced climatic change which would have impacted on where and how they lived. Expanding ice sheets would have resulted in much of Britain becoming uninhabitable. In contrast with other interglacials, MIS 3 would have been markedly cooler. It is thought that Neanderthals would have sought areas of refuge, sheltered valleys for instance, to take advantage of the conditions afforded by micro-climates. The aim of this study is to discover if the North Downs in Kent could have been one of these 'refugias'.

The direction that the research will take will be analysing artefact collections from the Middle Palaeolithic found in the study area. A notable Antiquarian researcher on the North Downs was Benjamin Harrison. He collected artefacts and recorded them on the contours of a paper map, in a log book with the findspot OD level and as drawings. Today many of these artefacts are in Maidstone Museum, in other museums or with private collectors. These will need to be located as fully as possible.

Keywords: Neanderthal, climate, ice sheets, artefacts, GIS, DTM

### **Evguenia Anichtchenko**

#### Ancient Boats of the Arctic: towards Understanding the Potential of Skin Boat Archaeology

Day 1 - 16:05

Covering over 100,000 km of coastline, the skin boat traditions of the Arctic and Subarctic zones are arguably among the most expansive watercraft technologies in the world, going back at least 10,000 years ago, and in some circumpolar regions, probably even older. Despite this impressive presence, the history of these watercraft remains poorly understood, particularly for the periods predating "ethnographic times." Archaeological finds are often overlooked either because the researchers are unaware of their existence or, more often, because of the challenging nature of this data. Most boat-related artefacts are fragments, undated and often with inconclusive stratigraphic provenance. At the same time, vessel-derived artefacts are a fairly standard occurrence in the coastal archaeological sites of the high Arctic, particularly in North America, inviting more serious considerations of their research potential. This paper presents some results of the author's on-going study of the archaeological record of skin-covered watercraft with a specific focus on the recent discovery of 1,000 year-old kayak and umiak remains from the Birnirk archaeological site in Barrow, Alaska and its implications for understanding broader context of maritime mobility in North American Arctic.

Keywords: maritime, boats, Alaska

#### Session 6: Just Who Do You Think You Are?

Chair: Emilia Mataix Ferrándiz

#### **Ferenc Toth**

#### Men, Masculinity and Health in Medieval Alba Iulia, Romania

Supervisors: Dr Jo Sofaer

Day 1 - 16:40 [Via Skype]

It has long been considered fact that biological differences between men and women account for the types of diseases which affect them and how long they live. Long assumed biological determinants of mortality and health may not be entirely biological. Culturally appropriate behaviours for men and women lead to different health outcomes.

In my dissertation work I am attempting to study the health of men in a past population using biological indicators of health visible on the skeleton. Moreover, I am seeking to examine how men thought of themselves as men (masculinity) and what influences this had on their health outcomes.

This winter I collected data from skeletal remains from graves excavated in Alba Iulia, Romania, from a cemetery in use from the 9th to the 14th centuries, with majority of graves dated to the 12th century. The archaeologists unearthed the remains of about 450 individuals whose skeletons I analysed using standard osteological procedures.

Combining data from historical sources, skeletal, and archaeological data I will examine how men in Alba Iulia constructed their masculinity and how this affected their health as visible on the skeleton.

Keywords: bioarchaeology, gender archaeology, men's health, eastern Europe

#### Sarah Stark

#### The Shape of Childhood

Supervisors: Dr Jo Sofaer, Dr Sonia Zakrzewski, Professor Simon Mays

Day 1 - 16:55

The development of juvenile long bones is influenced by multiple factors, ranging from genetics to environmental and nutritional impacts. Traditionally, these studies are carried out through plotting long bone lengths against dental development to create growth trajectories. As children are easily susceptible to stress, these 'growth trajectories' are compared to modern growth studies to determine the overall health of past populations. The use of CT scans has aided this field by studying the internal geometries of long bones which reveal information on nutrition and biomechanics. However, little is known about the development of surface geometries.

This research is split into small projects to address the question 'What is the Shape of Childhood?' The first study focuses on data collection by comparing the quality and cost of three dimensional models from photogrammetry, laser, and structured light scanning. Geometric Morphometrics is a growing field within osteological research which makes an ideal tool for the analysis of shape variation. This technique will be used to analyse the three dimensional bone models of the humerus, femur and tibia from infant to 12 year olds from the medieval site of Wharram Percy. This approach will tease apart the variables of shape trajectories for: individual elements, symmetry, upper vs lower limb, nutritional stress, and internal vs external bone geometries. The importance of these studies will aid in understanding growth and human variation from medieval populations as well as create a methodology of data collection and analysis that can be used in future growth studies.

Keywords: osteology, geometric morphometrics, biomechanics, human variation

### **Lucy Elkerton**

#### Images of Gender in the Iberian Peninsula

Supervisors: Dr Louise Revell, Dr Shelley Hales

Day 1 - 17:10

The mosaics of Roman Iberia have been comparatively neglected as an important body of evidence for the society that created them. They contain a range of vivid images including mythological and allegorical scenes, and scenes of "everyday" life. This research aims to demonstrate the potential of this material in understanding the social structures of the communities of the provincial inhabitants of the Iberian Peninsula, in particular in questions of gender identity. How do the images on these mosaics impact on the way that people within this particular community had a sense of their gender? I will argue that by studying the mosaics of the Iberian Peninsula we can discorn a discourse of gender: that the images contribute to, and form part of, ideas about what is appropriate behaviour within these communities, and the construction of both masculinities and femininities. This study will specifically look at these questions and this evidence in its local context. In particular, this talk will focus on my initial research so far, which has examined particular mosaics which contribute to an idea of masculinity. For example, a number of hunting mosaics are considered, alongside images of violence against women, which both seem to reinforce a particular set of behaviours for ideal manhood within this provincial community. I aim to examine these mosaics both as images of art and as physical artefacts that exist in an archaeological context. By doing so, I believe I can contribute significantly to our knowledge of constructions of gender in Roman Iberia.

Keywords: gender, art, classics

### Stephanie Wright

#### Studying Impairment and Disability in a Roman Context

Supervisors: Dr Sonia Zakrzewski

Day 1 - 17:25

There is a growing corpus of interesting archaeological research discussing the expression of identity in burial contexts. Deviant burial has been a core area of discussion, especially in relation to disabled identity; it often being suggested that deviant burial reflects a negative reaction to disability in the past, relating to fear, stigma and intolerance. However how much burial contexts reflect the everyday identity of the deceased has been increasingly questioned. Does deviant burial reflect everyday attitudes or is it the superstitious actions of a mourning population dealing with the uncomfortable prospect of death? Nevertheless, the burial context can perhaps offer a more everyday insight into disabled identity, through the skeletal remains themselves. The project aims to provide a new perspective on how impairment and disability impacted a person's experience and identity in the Roman period. This paper briefly discusses previous work exploring disability in the Roman period and summarises a new methodology to be used in the future.

Keywords: disability, identity, osteoarchaoelogy, bioarchaeology, Roman



### Session 1: I Got 99 Problems but the Public Ain't One Chair: Dr Paul Reilly

#### Eleonora Gandolfi

#### **MOOCCH: Massive Online Open Courses & Cultural Heritage**

Supervisors: Professor Graeme Earl

Day 2 - 09:00

In the last couple of years, MOOCs have become prominent in the Higher Education market. Increasingly, Universities are offering a greater variety of courses to increase their attraction to prospective students and promote their research. Specifically in Heritage, a few MOOCs have focused on making archaeological content accessible to a wider audience.

This paper aims to evaluate what is currently available on the market using the Southampton Portus MOOC as a case study. To achieve this, current and potential links with the local community will be looked at to monitor engagement and identify future directions

Some of the questions that will be explored are:

- If MOOCs are designed to develop globally engaged students and institutions, can MOOCAs help the discipline to do the same with geographically dispersed communities?
- Can MOOCAs help in opening up archaeology to the masses and promote responsible tourism?
- Are we prepared for the risks of globalising archaeology?

Keywords: public engagement, local cultural heritage, education, cross-cultural connection

### **Dan Joyce**

# The Implications of Recently Developed Low Cost Technologies for Archaeological and Cultural Recording, Storage and Dissemination

Supervisors: Professor Graeme Earl

Day 2 - 09:15

Archaeological and Cultural Heritage recording have long used technological developments from other industries in recording. This PhD will assess the potential of a number of recently developed technologies which can be employed; whether for recording, conservation or dissemination purposes. Many of these come from companies aimed at the Maker Movement while other technologies are provided by crowdfunding.

Unmanned Aerial Vehicle (UAV) technologies have already provided a means to record faster, more comprehensively and cheaper with photogrammetry; as well as providing a means to easily re-record the same elements with the minimum of effort. And new different recording technologies have become available including LIDAR and Multispectral packages for UAVs. Together with this the development of cloud control of UAVs allows the completely automatic flight and processing of data. Parallel developments in the past few years have brought new technologies to autonomous flight and therefore the potential automatic recording of Archaeology and Cultural Heritage, reducing both time and costs.

Developments in the design of metadata used to record 3D models, together with annotation techniques, has opened up the potential of annotating parts of 3D models created with metadata and using this to display parts of them. This information can then be integrated with data from traditional recording methods within a repository so that the results can be queried and displayed.

The potential of combining cloud recording techniques with cloud storage in a repository together with dissemination techniques using metadata can provide a complete workflow from recording through dissemination, re-evaluation and archiving.

Keywords: UAV, drone, photogammetry, cloud, cultural heritage, crowdfunding, recording, metadata

#### **Danielle Newman**

#### The Ethnography of Engagement within Maritime Archaeology

Supervisors: Dr Lucy Blue, Professor Stephanie Moser, Dr Jesse Ransley

Day 2 - 09:30

Increasingly, archaeologists are recognising the importance of researching how we both communicate our research to the public and provide access to both this research and sites. This is in large part due to recognition of the broader moral responsibilities of archaeology to inform and interest the public in shared heritage. As well, there is an increased understanding that public perception helps shapes government policy and funding.

In order to better understand how to achieve the above goals, there has been a great deal of research that documents public access initiatives and the methodologies employed globally to provide access to sites and communicate effectively with the public. However, very little research has been done into how these initiatives are created and the role that the people who deliver them believe they play. In order to better understand this vocation and the mindset of the people engaged in it, an ethnographic approach using interviews and observation has been employed to study several initiatives. The aim is to provide better understanding of the role engagement plays within maritime archaeology as a whole.

This talk will focus on the initial results of work into two aspects of my thesis project: public perception and delivery of public engagement programming. Information gained through a survey of maritime archaeology MOOC participants will be used to consider some concepts of public perception. Analysis of results of several interviews with individuals involved in maritime public engagement initiatives will be discussed and presented within the current theoretical framework of the thesis.

Keywords: Ethnography, public archaeology, community archaeology, engagement, heritage management

#### **Trevor Wayne Rowe**

#### AR in Archaeology Tourism and Site Interpretation

Supervisors: Dr David Wheatley, Professor Graeme Earl

Day 2 - 09:45

Despite the substantial growth in the field of computer simulations, the idea of augmented reality or, a live direct or indirect view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data, is nothing new; but a database that can link an ever growing knowledge base to a publicly accessible database of this nature is. With the use of smart phones and tablets, an application that can utilise this technology can be an invaluable tool. From an archaeological view point, there has always been a division in the discipline, knowledge observed in the field and data gathered and analysed in the lab. Having the ability to link the empirical data learned from laboratory analysis and having it rendered into the objective environment would be vital to the interpretation process.

This project is centred on a database that can link archaeological information to a three-dimensional model being rendered in a physical environment. This can easily be done. This technology already exists in simple handheld video games but instead of targets and scoring points we replace it with historical facts and archaeological data. The key concepts that this project will answer are: how viable is AR to increase public awareness and education to the archaeological and historical information? Can AR be used to bridge the gap between the field and the lab? How does AR change the interpretation process of archaeological sites?

Keywords: Archaeology, AR, Augmented Reality, Virtual Reality

### **Helen Stefanopoulos**

Citizens in Action: Urban Movements and Archaeological Sites in Athens

Supervisors: Professor Yannis Hamilakis, Dr Yvonne Marshall

Day 2 -10:00

Exclusive state authority and ownership of Greece's archaeological heritage have created a substantial gap between the ancient past and contemporary Greek society. Amongst others, the ideological foundations and disciplinary practices of the archaeological service have long functioned as an alienating factor on numerous levels, isolating and fossilising a version of the past and of archaeological importance that seems almost 'untouchable' by contemporary society. This distance has further obstructed the formation of an ongoing, active collaboration between the archaeological service and local communities residing in close proximity to archaeological sites.

The emergence of urban movements in Athens in recent years has further revealed the extent to which official archaeological practices, narratives, interpretations and state bureaucracy have impeded rather than facilitated a reflexive relationship between local communities and antiquity. Utilising an interdisciplinary approach, my research investigates the alternative uses, narratives and interactions of archaeological sites by urban movements/local communities, and their efforts to protect and reappropriate these through 'unofficial' practices. Furthermore, it critically examines central issues involving archaeological sites in Athens, such as the effects of neighbourhood gentrification, private interests and limited site access, amongst others. In doing so, it aims to understand the modern significations attributed to these sites by local communities and to identify effective ways in reconnecting these sites both with local residents and the present.

Keywords: urban movements, Greek Archaeological Service, heritage management

# Session 2: More Than Just A Pretty Scene

Chair: Iza Romanowska

#### Joana Valdez-Tullett

#### The Construction of a Prehistoric Tale: New Data for the Study of Atlantic Rock Art

Supervisors: Dr Andy Jones, Dr David Wheatley, Dr Fraser Sturt

Day 2 - 10:35

The prehistoric carving tradition commonly known as Atlantic Rock Art presents a series of difficulties to its study. From the biography of its research to the nature of its character, many are the challenges to overcome in order to understand this wide phenomenon.

This PhD project aims at the study of Atlantic Rock Art in a holistic way, ignoring the borders of modern countries that so often constitute an obstacle to the evolution of investigations. It is composed of several phases of research and in previous years some of these have already been scrutinised: the outline of the project, the analysis of bibliography review and its limitations as well as the methodology developed.

In this edition of PGRAS, the results of a fieldwork campaign conducted in Scotland will be discussed. The research involved the re-identification of previously known sites with rock art in the peninsula of the Machars (Dumfries and Galloway); the recording of some of the rocks with RTI and Photogrammetry techniques; the collection of a series of observations regarding the natural and morphological characteristics of not only the carvings but their landscape location. Furthermore, the results obtained through a number of spatial analyses developed in GIS were also contrasted with the reality in the field.

Keywords: Atlantic rock art, landscape, spatial analysis, Scotland

### Stéphanie Mailleur

# The Landscapes of Roman Mediterranean Ports Through the Epigraphic and Iconographic Evidence

Supervisors: Professor Simon Keay, Professor Pascal Arnaud, Dr Dragana Mladenović

Day 2 - 10:50

Despite the recent excavations conducted at Roman ports, the comprehension of the organisation and the reality of the landscape of Roman ports is unclear. Use of other sources like epigraphy or iconography is necessary as they can provide spatial and functional information which archaeological sources cannot provide.

The aim of my research is to study the material characteristics of Roman port landscapes from the cross study of the iconographic and epigraphic sources. In others words, my thesis is focused on the study of the different infrastructures of Roman ports. Through this work, I will try to answer to the following questions: which structures can we find in the port according to the sources? What do the structures look like? What are their function? Who works inside?

The images of ports, quite abundant during the imperial period, are precious documents for our understanding of Roman ports as they can show us what no longer exists. Indeed, the archaeological remains are subject to several problems such as marine disintegration, changes in sea level or construction projects.

As it is difficult to exploit only the iconographic evidence, the use of epigraphy is fundamental to complete this study. In fact, the inscriptions provide spatial information and confirm as well the existence of elements known by iconography. For instance, the votive columns found in Caesarea Maritima are mentioned in an inscription from Portus and appear moreover in iconography. Some port-structures, like the custom-office ( $\tau\epsilon\lambda\dot{\omega}\nu\iota\sigma\nu$ ), are difficult to identify in the iconography but are well documented by the epigraphy.

Keywords: Roman ports, iconography, epigraphy

#### **Leah Holguin**

#### Disappearing Landscapes of the Gobi Desert, Mongolia

Supervisors: Dr David Wheatley, Dr Fraser Sturt

Day 2 - 11:05

The Gobi Desert of Mongolia remains unexplored and largely unknown. The absence of any data, environmental or archaeological, has created a huge gap in scientific knowledge about this region. The recent discovery of the Ulaan Nuur paleo lake and paleo hydrology system in the South Gobi shows that at its peak, the paleo lake was over 19,000 square kilometres during the Holocene. This is significant because the area around this paleo hydrology system would have been an ideally habitable environment for prolonged human activity. The aim of this research is to explore the changing landscape dynamics of the Ulaan Nuur paleo hydrology system at a multi scalar level, in order to examine how people may have responded to, and adapted to long-term changes of climatic uncertainty. To do this, a paleo environmental reconstruction of the area will be created using several proxy indicators of climate change, combined with archaeological survey, in order to understand and contribute to knowledge about local landscape dynamics occurring in this area, and how these changes may have influenced those occurring on a larger regional scale.

Keywords: landscape, environmental reconstruction, climactic modelling, climate change, human adaptation, Holocene, hydrology

#### **Thomas Wellicome**

#### Later Prehistoric Settlement on Cranborne Chase, Dorset

Supervisors: Dr Josh Pollard

Day 2 - 11:20

The later prehistoric enclosures of Cranborne Chase represent a unique archaeological resource. Aerial photographic mapping of these features and several important British Iron Age 'type site' excavations, for example at Little Woodbury and Gussage All Saints have led many to believe that the Iron Age in this area is well understood. But how well do we understand the chronology, spatial and social relations of these sites? How do the geological, topographic and geographic conditions effect placement and use? Is the use of the numerous enclosures contemporary, or dispersed over time? Does their form alter over time, and are the settlements occupied continuously or sporadically? Does the internal layout of enclosure vary between similar and different types of enclosure? This presentation will examine the methods that will be used to try and answer these questions, which form the main areas of research for my PhD thesis. These include examination of geological and topographic maps in relation to settlement location and form, geophysical surveys to understand internal enclosure layout and small scale evaluation test pitting to retrieve dating evidence.

Keywords: landscape, geophysics, social relations, geology, topography, later pre-history, Iron Age

# Session 3: Oh I Wish I Could be by the Seaside!

Chair: Ammandeep Kaur Mahal

#### Núria Garcia Casacuberta

#### Scripta Manent. In Search for Harbour Data in Ancient Literary Sources

Supervisors: Professor Simon Keay, Dr Dragana Mladenović

Day 2 - 11:55

In this presentation I would like to describe the criteria that defines my research materials and methods. My research aims at examining the meaning of terms referring to Mediterranean harbours in ancient Greek and Latin. Therefore I need to read the original texts as they are the only lexical testimonies preserved from antiquity. However, a timeline has to be established in order to coherently structure the contents of my research, both in the literary field but also when comparing it to the archaeological remains that have been found. In order to make my research clearer for the audience I shall provide brief examples in Greek and in Latin.

Keywords: Mediterranean Sea, ports, ancient literature, Greek, Latin

#### **Martin Roderick Stead**

#### The Building and Development of Philippine Logboats

Supervisors: Dr Lucy Blue

Day 2 - 12:10

When the Spanish colonialists settled in the Philippines they found a vibrant maritime culture in place. This included the building of various types of plank-built galleys which used a dowel technology and the lashed lug technique. However, by far the most numerous vessels were logboats, the Volkswagen of the Philippines. The logboats were used in on rivers and lakes, but also on the sea. They provided local transportation and also a means of harvesting the rich marine resources. When used offshore they usually employed single or double outriggers of wood or bamboo to provide additional stability. Tracing the early development of outriggers is one of the challenging issues for this research.

These logboats were carved from a single log, but sometimes were extended by attaching additional strakes of wood or woven bamboo. There is little evidence that these logboats were expanded by the use of heat or steam. The logboats were powered by paddles, oars and sails.

Some logboats are still in use today, but there are very few examples identified and preserved in the archaeological record, so this information must be amplified by literary sources and ethnographic studies.

There has been very little academic study of these logboats in the Philippines and so this is a novel area for research.

Keywords: Philippines, logboats, wood-working, maritime culture

### **Tyra Standen**

Hayfever, Hovercrafts and a 'UFO Landing Strip': A Reflection on Searching for the Mesolithic in Somerset

Supervisors: Dr Fraser Sturt, Dr Justin Dix

Day 2- 12:25

The effects of environmental change on Mesolithic communities have long been of key interest in Mesolithic studies. Since Clark's seminal work at Star Carr, a multidisciplinary approach to the Mesolithic has frequently been adopted during archaeological investigations — with the reconstruction of local environmental conditions being seen as a vital component to our understanding of this period. However, finding sites which produce both anthropogenic and palaeoenvironmental material relating to this period is often problematic. In July 2014, two areas in western Somerset were therefore targeted for more in-depth archaeological investigation in an attempt to find new material dating to the Mesolithic. These investigations comprised both onshore and intertidal excavations and focused on areas with limited known archaeological or palaeoenvironmental data. This paper reports on the results of these small scale investigations before reflecting on their potential implications for furthering our understanding of Mesolithic human-environment interactions within the Severn Estuary and Bristol Channel region.

Keywords: mesolithic, landscape, coastal, environmental change, fieldwork

### Rodrigo Ortiz-Vázquez

#### A Maritime Landscape Study of the Modern World

Supervisors: Dr Jon Adams, Dr Fraser Sturt

Day 2 - 12:40

Mexico's maritime landscapes have been relatively understudied, in particular at the liminal zone where land meets sea. This tendency in academia has led to an impoverished account of this country's past and a skewed telling of national history, in which the strong maritime character of Mexico has been eclipsed by an eminently terrestrial narrative. My thesis will address this lacunae in our knowledge through targeted research into landscapes shaped in and around ports of the past, as well as the relevance of maritime culture within the colonial period of Mexico.

In order to overcome the challenges of reconstructing both lost landscapes and social formations, I will develop in my thesis an interdisciplinary approach that will bring together the strengths of archaeological, historical, remote sensing, and geophysical methods for social interpretation.

This research will improve our understanding of social dynamics in New Spain's main ports through the study of their close relation with the maritime landscapes in which they originally developed.

I will conduct my analysis framing it from a global perspective, placing a stronger emphasis in the role of historical archaeology in the modern world. Additionally, my research will focus on particular case studies of the port cities of Veracruz, Campeche and Acapulco, with the intention to achieve a higher resolution in my study of the Mexican multicultural society and their environments.

Keywords: modern world historical archaeology, maritime archaeology, maritime landscapes, ports, networks



# Session 4: Visionary Chair: Alan Slade

#### **Pat Tanner**

#### Digital Recording and Reconstruction of Boat and Ship Finds

Supervisors: Dr Lucy Blue, Professor Graeme Earl, Dr Stephen Boyd, Dr Fred Hocker

Day 2 - 14:00

Traditionally maritime archaeological recording and reconstruction consisted of various techniques for the documentation of full size ship timbers, including scaled sketch drawings, contact one to one tracing, and non-contact tracing using a "projection by eye" technique onto transparent polyester film set above the item being recorded. The recorded data is reproduced onto paper, cardboard or wood to construct a scaled model of the hypothetical reconstruction.

There have been many recent advances in the Post-Excavation digital recording and documentation processes. The purpose of this thesis is to examine the use of 3D laser scanning and advanced computer 3D digital modelling for the analysis and digital reconstruction of boat and ship finds. The overall aim is to develop three-dimensional virtual modelling techniques to accurately reconstruct a boat or ship find, and scientifically test the hypothetical reconstruction(s).

Using examples from the Traditional Boats of Ireland Project and the Newport Medieval Ship, case studies will demonstrate the capability of 3D laser scanning to rapidly capture three dimensional data in the field, and create a three dimensional digital model. In creating the digital model, each individual component is solid modelled in the computer software and assigned a material. This enables the software to calculate important factors such as centre of gravity and density in order to establish a floatation condition for the vessel. It is also possible to examine construction details, hydrostatic characteristics, and analyse external influences such as ballast, cargo and crew, wind load on rigging and hull, and sea conditions.

Keywords: maritime, laser scanner, contact digitising, 3D modelling, digital reconstructions

#### **Carolyn Felton**

# Sexual Dimorphism in Vertebral Morphology with Specific Reference to the Zygopophyseal Joint

Supervisors: Dr Jo Sofaer, Dr Sonia Zakrzewski

Day 2 - 14:15

Estimation of sex from archaeologically derived skeletal remains is standard practice in osteological analysis and in conjunction with age at death data allows for the construction of the demographic profile of a population.

It is achieved by comparing differences due to sexual dimorphism in the morphology and dimensions of bones. These are particularly obvious in sex-role specific bones such as the pelvis and skull. However, in cases of poor skeletal preservation, sex differences between non-sex role specific bones are used.

There has been much research into sexual dimorphism of non sex-role specific bones that has focused on direct size/shape comparison. Some of these studies have identified that changes can be population or age dependent. What other influences may affect the development and expression of sexually dimorphic features?

This presentation will identify extrinsic factors considered relevant to my study of sexual dimorphism of the zygapophyseal joints of the vertebral column and discuss the methods used to measure them before presenting the results of my research to date.

Keywords: sexual dimorphism, bioculturalism, life course

### **Christian Hoggard**

Does Size Really Matter? Traditional and Geometric Morphometric Approaches to the Middle Palaeolithic Concurrent Blade Relationship

Supervisors: Dr William Davies, Dr John McNabb, Professor Clive Gamble

Day 2 - 14:30

From the earliest Middle Palaeolithic sites of Mesvin IV and Rissori IVB (c.300,000-250,000 BP) to the *Technocomplexe du Nord-Ouest* (c.125,000-71,000 BP) and later Bohunician and Châtelperronian industries (c.55,000-40,000 BP), evidence highlights how Neanderthals utilised a Laminar core volume management strategy of blade production. Roughly 70% of these published technological blade sites also contain blades produced from another technique, a Levallois recurrent (uni/bi-directional) strategy. This relationship has not been acknowledged before, and is poorly understood: these Levallois blades are products which feature a similar high elongation index and appear to be similar—or are they? Do they represent tools for different activities, or are they equifinal in form? Understanding this relationship is essential for a better understanding of Middle Palaeolithic technological diversity and Neanderthal innovation and creativity.

This presentation outlines how the methodology has been refined throughout the second year of doctoral research, with a technological, experimental and traditional/geometric-morphometric framework taking precedence. Details about this framework, e.g. the adoption of Fast Fourier Transformations in contrast to Elliptical Fourier Analysis, the programs used, and the logistics of the experimental dataset, will be outlined in detail. Results of primary data collection from Belgian sites (Rissori and Mesvin), and the aforementioned experimental dataset, will also be outlined and discussed.

Finally, this presentation will outline the future of this doctoral research: what sites will be analysed next, what results do we expect, and what these results mean to our understanding of the concurrent relationship.

Keywords: technology, diversity, equifinality, lithics, concurrency, morphometric, geometric

#### **Elizabeth Richley**

Three Dimensional Integration: Results So Far

Supervisors: Professor Simon Keay, Professor Tony Brown, Professor Graeme Earl

Day 2 - 14:45

The implementation of integration techniques is little exploited and that which is done utilises only small segments of three-dimensional data such as GPR and ERT datasets. GPR datasets can, in optimal conditions, provide rich, detailed information on subsurface features for instance at Carnuntum, Austria the individual tiles in a Roman hypocaust floor can be defined (Neubauer et al. 2002). Therefore, it would seem unwise to disregard and leave redundant the majority of the dataset. In order to realise the full potential of geophysics it is important to determine the degree of added information a full three dimensional data set provides over the use of small segments of it. It is crucial to bear in mind that this research is exploring the potential for integration methods on just one site. Being able to do this for Portus, an important but challenging site in a maritime context, has major implications for other equally complex sites, and also for simpler ones too. Demonstrating the application, successfully or not, of integration methods will help shape and develop the use of multiple datasets on other archaeological sites.

# Session 5: Not Just Another Brick in the Wall Chair: Matthew Tyler-Jones

#### **Nicholas Dugdale**

Re-evaluating the Extent of Imperial Involvement in the Late Antique Economy: New Evidence from the Trade in Worked Marble

Supervisors: Professor Simon Keay, Dr Leif Isaksen

Day 2 - 15:20 [Via Skype]

One of the most hotly contested topics in recent scholarship on Late Antiquity concerns the degree to which economic activity in the Late Antique world was driven by private commerce or by state intervention, for example through subsidies, state-sponsored production, or coerced exchange. I address this question through the framework of a case study focusing on the trade in worked marble, which provides a unique window by which to examine the role played by the state in the wider economy.

Keywords: sea trade, shipping, trade networks, geospatial modelling, connectivity, marble, Late Antiquity, Justinian, shipping, quarrying, economics

#### **Katherine Crawford**

#### **Walking Between Gods and Mortals**

Supervisors: Professor Simon Keay, Dr Dragana Mladenović

Day 2 - 15:35

My research attempts to address the question of how we can study and understand the sacrality of urban landscapes, and how such sacrality impacted both urban planning and interactions within the cityscape. Using Ostia as a case study on account of its level of preservation, the impact of religion will be explored. Sacred activity manifests itself in various forms such as temples, epigraphic evidence and sculpture. All of these examples can further be found to play a part in religious processions. The significance of Roman religious processions have long been recognised by scholars as important socio-political events. Despite their regular occurrence, daily processions have remained relatively ignored in favour of their larger counterparts; triumphal, circus, and funerary processions that receive more attention from ancient literary sources.

Processions were chosen to study the sacrality of landscapes because they allowed for the greatest contact with the urban landscape. The question remains, how much was the city and its inhabitants affected by these shows of religious devotion? My research takes an innovative approach to try and address this question, which includes the consideration of classical sources, archaeological evidence, anthropological comparisons as well as digital computing methods to create an integrated picture of the routes processions took through the city of Ostia. The analysis of these processional routes will help to quantify how much processions impacted Ostia's cityscape and urban activity based upon the areas traversed, visibility of architectural features and the influence of sound.

Keywords: Ostia, ancient urbanism, GIS visualisation

#### **Isobel Pinder**

# Through Wall's Chink: the Relationship Between Roman City Walls, Religious Movement and the Articulation of Space

Supervisors: Professor Simon Keay, Dr Louise Revell

Day 1 - 15:50

Built to impress as much as to protect, Roman city walls were a potent assertion of urban identity, projecting a deliberate statement of power and status. They embodied community-specific decisions driven by practicality, ritual and ideology as part of the ordered and meaningful use of public space. Their role in memorialising and expressing social and cultural values through religious practice has, however, been insufficiently recognised. This paper explores how the positioning of city walls and gates related to ritual processions and sacred ways so as to perpetuate social memory and create a shared understanding of urban space.

The tradition of marking out sacred topography through processions is documented at Rome in the festival of the Amburbium. Careful analysis of the relationship between city walls and the urban street network in other Roman cities, especially where that network deviates from an otherwise regular grid plan, reveals the interplay between movement and city walls in Roman cities. The placement of gateways at points where a processional way crossed the urban boundary was a key determinant of movement in Roman cities and framed the transition between urban and rural space.

Using case studies at Fanum Fortunae and Hispellum in central Italy, I show how Roman cities may have appropriated pre-Roman processional routes and incorporated their memory into the living architecture of the colonial city. In conclusion, the importance of city walls in furthering our understanding of how Roman cities were experienced and traversed is emphasised.

Keywords: urban, Roman

#### **James Miles**

#### An Update on the Potential of Structural Analysis

Supervisors: Professor Graeme Earl, Professor David Hinton

Day 2 - 16:05

This multidisciplinary research provides a unique integration of structural analysis and archaeological interpretation, focused on the implications of methods used to generate input data and the analytical frameworks within which new interpretations emerge.

The main aims of the research is to explore the benefits of using structural analysis in archaeological contexts; to investigate how structural analysis can influence the way archaeological graphical simulations are produced; and to study the changes in structural properties of different forms of architectural styles. Structural analysis is widely used to determine static, dynamic, and thermal behaviour of physical systems and their components. Several methods can be employed to analyse building and non-building structures. The main purpose of structural analysis is to ensure the adequacy of the design from the view point of safety and serviceability of the structure and to check stability in existing systems. Although it plays an important role within many different disciplines, it is rarely applied within archaeology. Therefore the research that will be carried out will be based on the application of structural analysis within archaeology, specifically through archaeological interpretation and archaeological modelling of historic buildings and novel integration of voxel and surface techniques.

The work will include a state of the art report on the various tools used within recording, creating an overall analysis of 3D recording including laser scanning, photogrammetry, computed tomography and building surveying whilst at the same time outlining the future changes needed in recording and analysis.

Keywords: computing, medieval, structural analysis, 3D modelling

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### Session 6: Artefacts Roadshow Chair: Helen Chittock

#### **Peter Bye-Jensen**

# Causewayed Enclosures Under the Microscope - Preliminary Results of a Large Scale Use-Wear Analysis

Supervisors: Dr Andy Jones, Dr Josh Pollard

Day 2 - 16:40

Causewayed enclosures are some of the most significant monuments in the Early Neolithic, with a distribution over most of Europe. A recent programme of radiocarbon dating has refined our understanding of the chronology of this important class of monuments (Whittle et. al. 2011), many sites having relatively restricted periods of use. However the precise character of the activities that occur at these is still unclear; are these sites gathering places, mortuary sites, stock enclosures or defensive structures?

My research focuses on use-wear analysis of the flint assemblages from the primary phases of a number of well excavated sites in southern Britain, as a way of characterising activities at these sites. The sites selected for analysis so far are: Etton, Haddenham, Hambledon Hill, Stains, Windmill Hill, Carn Brea, Crickley Hill, Briar Hill, Orsett, Kingsborough 1.

The focus at the causewayed enclosures will be on the primary phases as these provide the best evidence for the initial use of these sites. At the time of the symposium there will be preliminary results ready from this project. This presentation will additionally explain the method utilised and the results and prospect of further analysis.

This project is funded by the South West and Wales Doctoral Training Program (SWW DTP).

Keywords: early neolithic, causewayed enclosures, use-wear analysis, flint

#### **Charlotte Dixon**

#### Collecting a Miniature World: Model Boat Building and Exhibition Mania

Supervisors: Dr Lucy Blue, Dr Helen Farr, Dr J.D. Hill

Day 2 - 16:55

Model boats from the Indian Ocean are well represented in UK museum collections. Such a presence stimulates questions such as why are they there, who collected them and what can they tell us today? Now, in the second year of research, the potential of the models as research tools is explored by considering the biases in their production and collection.

Following the success of the Great Exhibition in 1851, international exhibitions, expositions and world fairs became increasingly popular throughout the British Empire, Europe and North America. These made possible the demonstration of transnational material cultures through the display of both full size and miniaturised objects.

During this period of 'exhibition mania' model boats were made and displayed demonstrating technologies in Britain, the colonies and 'foreign' nations. With a number of the boat models in UK museums originating from such 'great' exhibitions, this paper will explore the significance of the collecting history and implications this may have in the study of traditional boats.

Keywords: model boats, museums, ethnography, collecting, Indian Ocean, boat building, traditional boats, miniaturisation

### **Peter Brugger**

#### The Addition of Touch. Museum Replicas: A New Method of Production and Execution

Supervisors: Professor Stephanie Moser

Day 2 - 17:10

Thomas Fuller in the 18<sup>th</sup>C recorded the saying: "seeing is believing, but feeling's the truth" – now if we apply this to object handling in a museum, the questions we have to ask ourselves: Can Object handling enable true interpretation? Can we be deceived by Touch? What can it bring to the experience?

Greater immersion adds to better interpretation. To add touch to a museum where previously you would only observe the object, the latter requires thinking and effort, whereas the former does not require thought or effort. A person in a museum who passively handles a replica will, without effort know so much more; through handling they become actively engaged.

Their interpretation is effortless. If the handling of replicas become standard practice shown in a way complimentary to the exhibited original artefact, could this effortlessness attract more people: the disabled or the disinterested to the institution?

The addition of touch in the museum by the 3D printing of archaeological replicas, this is what I want to talk about. Supported by current original data, this benefits: the museum, the discipline of archaeology, and above all the museum visitor.

Keywords: museum, touch, interpretation, replica, 3D printing

### **Elizabeth Osinga**

#### Reconstructing Rural Life in northeast Jordan: a Ceramic Approach

Supervisors: Professor Simon Keay, Dr Dragana Mladenović

Day 2 - 17:25 [Presented in Elizabeth's absence by Katherine Crawford]

Last year, I presented the history of the large rural site of Umm el-Jimal (c. 1st to 8th centuries AD, with a later medieval phase) and the domestic excavation project that yielded my ceramics, along with my basic research aim: to advance the currently lacklustre study of ceramics in the region by forming ware/fabric groups, quantifying finds and tracing production sites in order to help illuminate any shifts in trade over the centuries, which can then be placed in the wider context of economy and production in the Levant.

My first year of research was heavily focused on forming clear ware/fabric groups so that all pottery from excavations in summer 2014 could be recorded and quantified. At this symposium, I will summarise my recent work by: first, presenting a stratigraphic and ceramic analysis of the 2014 field season; and, second, introducing the neighbouring sites in the region and drawing out important themes and questions that arise from a critical review of the current state of archaeological research. Finally, I will discuss my plans for future work.

Keywords: ceramics, trade, socio-political change, rural/countryside archaeology



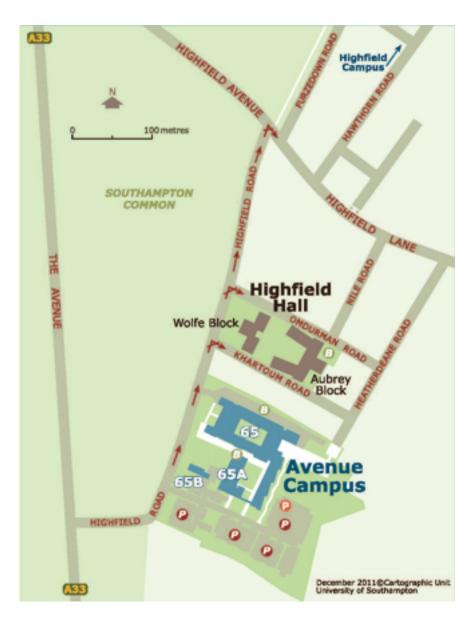
# **ACKNOWLEDGMENTS**

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The PGRAS2015 Committee:

Katherine Crawford Kate Rogers Pene Tsakanikou Stephanie Wright

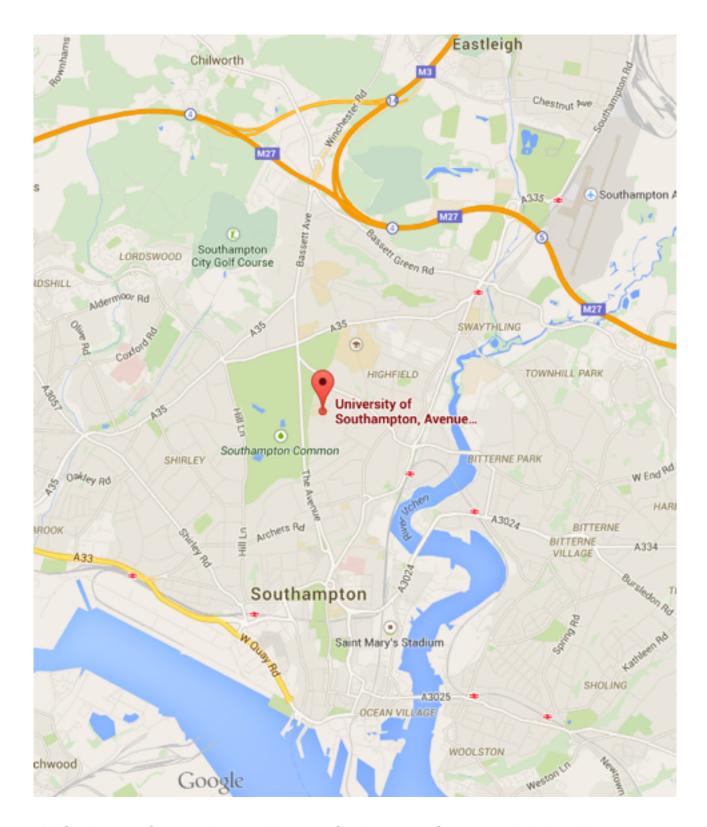
# **GETTING HERE**



# Lecture Theatre B Building 65

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BUS: Avenue Campus is two miles from Southampton Central. unilink bus: U2B CAR: Southampton is 75 miles (120km) from London. The M3 and M27 provide fast, direct access to the city.

From the M3: Exit at junction 14 (Southampton A33).

From the M27: Exit at junction 5 (Southampton Airport).

Postcode for satnav: SO17 1BF

Visitor parking: The closest Pay and Display parking is at Highfield Campus, accessed from University Road, a short walk from Avenue Campus.

