

The Archaeology of Seasonality

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The Royal Danish Academy of Sciences and Letters
Copenhagen, Denmark

Organisers:

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THE ARCHAEOLOGY OF SEASONALITY

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View of colonnaded streets and tower tombs in Palmyra (Photo: Rubina Raja).

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Outline

Seasonality is a crucial topic of study when addressing the ways in which past societies organised themselves throughout a year. However, seasonality remains a neglected aspect of human-nature relationships. Many activities would in past societies only have taken place at certain times of the year, mainly reflecting changing agricultural patterns and the activities undertaken, for example, when fields could not be cultivated and animals could not graze. It is assumed that indoor activities to a larger degree would have taken place in the winter than in the summer, for example, and that certain activities might even have been kept for the winter periods, such as indoor repair of houses and textile production and the like. Studying seasonality offers the opportunity to understand the temporal dimension of human activities over the year, and it opens up new perspectives on space and spatial practices in the ancient world.

Studies of seasonality through archaeological and historical evidence are rarely undertaken. Firstly because archaeological evidence does not often provide possibilities for studying such details, since contexts have often been disturbed over time, and seasonality cannot be studied in disturbed contexts. However, often undisturbed contexts are not approached with seasonality in mind. Such undisturbed contexts – which are often products of natural disasters such as earthquakes or landslides or man-spurred catastrophes such as wars and fires and consequently sudden abandonment – are usually analysed in order to understand the overall contexts and situations but not the time of year at which these might have taken place. The contexts are usually only taken as a *terminus post quem* or *ad quem*, which they present to the archaeologist or historian – but not in an absolute “high-definition” perspective, which they, however, also offer – namely the possibility to get closer to the exact time of year during which the event took place.

Although rare, some archaeological situations present us with evidence that allow us insight into the exact day and year of an event. This is the case at Jerash in Jordan where the earthquake of 18th January 749 CE, which shook parts of the Southern Levant, left Jerash devastated and in some parts never touched again. Since 2011, the Danish-German Jerash Northwest Quarter Project has worked in the Northwest Quarter of Jerash. This work has yielded evidence of domestic constructions that were spoiled on 18th January in the morning and never revisited until they were excavated during campaigns in 2014, 2015 and 2016. The excavations and their results have given us the impulse to host this conference and together with colleagues explore in more detail the full potential of how to study seasonality through archaeological evidence and a methodological framework that is yet to be fully developed.

Therefore, we invite a set of scholars who, in one way or the other, have concerned themselves with issues of seasonality. These are intended for publication in a collective volume on the *Archaeology of Seasonality*. The contributions will be published in the peer-reviewed series "Studies in Classical Archaeology" edited by Achim Lichtenberger and Rubina Raja.

The aim of the conference is to lay open and discuss evidence that gives indications of archaeological context, like the ones in Jerash, but we are also interested in learning about archaeological situations in which aspects of seasonality have only come to the forefront through the archaeological work undertaken. The intention is to discuss the potential and challenges presented to us by such evidence and discuss how we may optimise both what we can get out of the evidence itself and the methods used.

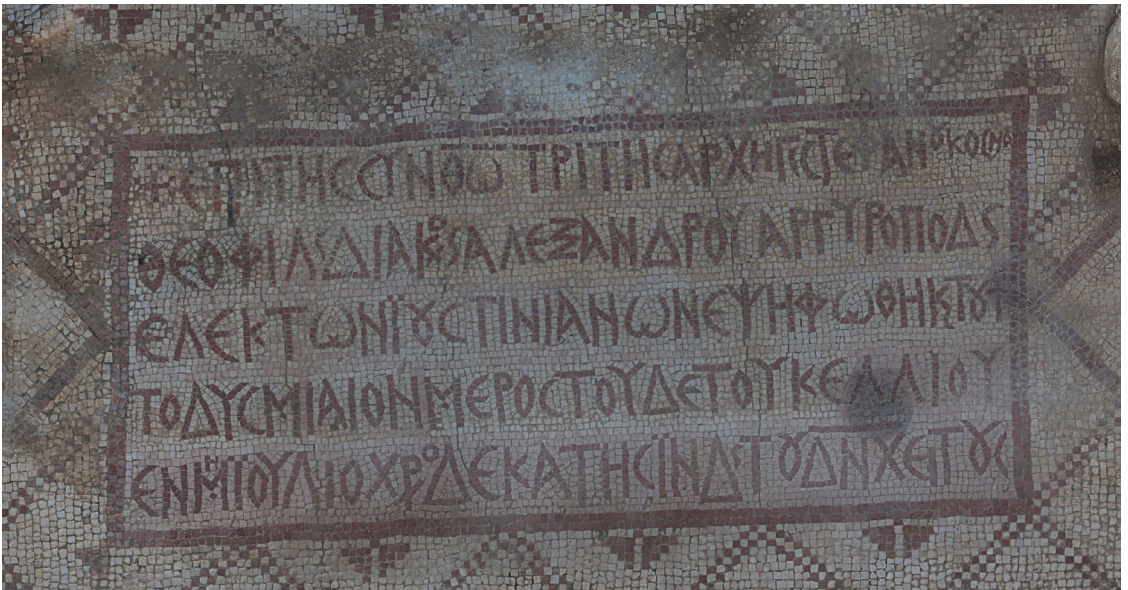
Programme

DAY 1: Thursday, 17 October 2019	
8:45–9:15	Registration + coffee and croissants (3rd floor)
9:15–9:45	Opening of the conference and introduction The Archaeology of Seasonality: New Perspectives Achim Lichtenberger (Westfälische Wilhelms-Universität Münster) and Rubina Raja (Aarhus University)
Section I: Economic Strategies in a Seasonal Perspective	
9:45–10:30	Seasonality and Migratory Work in Roman Agriculture Werner Tietz (University of Cologne)
10:30–11:15	Seasonal Diet in the Mediterranean Erica Rowan (Royal Holloway London)
11:15–11:45	COFFEE BREAK
11:45–12:30	To Everything There is a Season: The Dynamics of Seasonality in the Deserts of the Southern Levant in Ancient Times Steve Rosen (Ben Gurion University of the Negev)
12:30–13:30	LUNCH

Section II: The Seasonal Dimension of Catastrophic Events	
13:30–14:15	Tracing the Season of the Santorini (Thera) Eruption Felix Höflmayer (Austrian Academy of Sciences)
14:15–15:00	The Complicated Problem of Seasonality at Classical Olynthos, Greece Lisa Nevett (University of Michigan)
15:00–15:30	COFFEE BREAK
15:30–16:15	New Evidence for the Date of the Eruption of Mt. Vesuvius Massimo Osanna (Soprintendenza Pompei)
16:15–17:00	Pompeian Houses and Seasonality: A Contextual Approach Penelope M. Allison (University of Leicester)
18:00	Speakers' dinner at Restaurant Gorilla (Flæsketorvet 63, 1711 København)

DAY 2: Friday, 18 October 2019	
Section II: The Seasonal Dimension of Catastrophic Events (continuation)	
8:45–9:15	Coffee and croissants (3rd floor)
9:15–10:00	Seasonality and Urban Economy: The Case of Gerasa in Jordan Achim Lichtenberger (Westfälische Wilhelms-Universität Münster) and Rubina Raja (Aarhus University)
10:00–10:45	Solar Flare Events and High-Definition Datings in Archaeology Jesper Olsen (Aarhus University)
10:45–11:15	COFFEE BREAK
Section III: Seasonality of Religion	
11:15–12:00	Seasonality and the Calendar in Ovid's Exile Poetry Anke Walter (Newcastle University)
12:00–12:45	Seasonality of Timpone della Motta (Northern Calabria) during the Iron Age and the Archaic Period Jan K. Jakobsen (The Danish Institute in Rome), Gloria Mittica (The Danish Institute in Rome) and Felice Larocca (Centro Regionale di Speleologia Enzo dei Medici)
12:45–13:45	LUNCH

13:45–14:30	The Sanctuary of Jupiter Dolichenus at Doliche and the Seasonality of Sacrifice Michael Blömer (Aarhus University)
14:30–15:30	Final discussion and summing up Discussant: Will Wootton (Kings College London)
15:30–16:30	Drinks
16:30	End of conference



Mosaic inscription from the Mosaic Hall (Photo: The Danish-German Jerash Northwest Quarter Project).

Abstracts

Seasonality and Migratory Work in Roman Agriculture

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Focusing on plants as the largest source of diet in the ancient Mediterranean, seasonality meant that much changeable work had to be done, which required a variety of labour. Clear peaks alternated with times when work would be scarce and labour superfluous. The aims of this paper are thus to shed light on the strategies landowners and the rural lower classes in general developed to cope with these seasonal challenges. From the point of view of a landowner in need of extra labour, we can identify five such strategies: 1) the seasonal exchange of labour within the same economic entity, namely a household; 2) the individual hire of extra free labour on a day-to-day-basis; 3) the regular migration of labour between city and country amongst the lower strata of the economic pyramid; 4) long-term contracts with companies providing working gangs, operating on a strict schedule and often covering wide stretches of land; 5) the *paramone*, a very special yet poorly understood way of hiring labour for cash or credit money for days, months or even a few years. These strategies led to various extents of regular migration between towns and the country as well as different regions of the empire. This paper will try to shed new light on them as well as strengthen the perspective of the hired as opposed to the hiring part. It will also touch upon the opposition of slavery versus free labour, confirming the view that slavery was not the most economically rational way of supplying labour to one's estate at high seasons.

Seasonal Diet in the Mediterranean

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Diet in the ancient Mediterranean was not only dictated by the seasons and the availability of particular foodstuffs but by the cultural, social and religious practices of an individual's local and wider communities. The consumption of specific foods at festivals, the seasonal migration of wild and domestic animals, and periods of harvest and food processing all contributed to the creation of a varied and continuously changing diet. Yet, people in Antiquity similarly sought to combat or manipulate seasonality through the processing and preservation of a range of goods, often enabling them to be consumed all year round. This paper explores the way archaeological material, in association with the literary sources, can enhance our understanding of seasonal consumption patterns, with a particular focus on archaeobotanical and zooarchaeological data from the Greek and Roman periods. What evidence do we have for seasonality beyond sites that suffered catastrophic and sudden destruction such as Pompeii? What archaeological tools are at our disposal? Following a section on methodological approaches and available data sets, the paper moves on to an assessment of seasonality and the way it differed based on environment, socioeconomic status and rural vs. urban lifestyles. How did differences in geography and climate within the Mediterranean influence seasonal diets? To what extent did rural dietary patterns differ from urban ones? How did the calendar of religious festivals, and their associated foodstuffs, help mark the passage of time? The paper concludes by exploring the impact seasonality had on the generation of traditions, memories and conceptualisations of space and time in the ancient world.

To Everything There Is a Season: The Dynamics of Seasonality in the Deserts of the Southern Levant in Ancient Times

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Seasonal behaviours in the Levantine deserts in ancient times varied over space and evolved significantly over the long term. Although always built on the backdrop of desert ecological systems with sparse winter/spring rains and harsh dry summers, local environmental systems (e.g. topography and water sources) and climatic fluctuations affected resource abundance and the timing of resource availability, obviously resulting in adjustments in mobility patterns and other aspects of seasonal behaviours. No less important: Varying social factors, such as evolving subsistence systems and social organisation, cumulative technologies and changing relations with the settled zone, demonstrably affected patterns of mobility and seasonality. Environmentally, such fluctuations as the 8.2ky event seem to have effected major shifts in mobility, cementing patterns of large-scale herding well after the initial adoption of domestic goat and sheep. Other climatic episodes resulted in shifts in the edge of farming practicability, effectively expanding grazing zones and changing mobility patterns. Changes in subsistence, such as the transition to herding from hunting, required new resources and strategies for sustaining herds and thus new patterns of seasonal mobility. With the rise of social complexity and the development of economic asymmetries between nomad and sedentary societies, mobility patterns adjusted to include habitual and scheduled access to markets. Over the course of time, seasonal behaviours also adjusted to new technologies – for example, run-off irrigation, cisterns, wells, camel domestication etc.

Tracing the Season of the Santorini (Thera) Eruption

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The mid-second millennium BCE eruption of Santorini (Thera) was one of the biggest volcanic explosions of the Holocene, which significantly changed the landscape of the island and buried not only the settlement of Akrotiri but also most parts of the island under vast amounts of pumice. The absolute calendar date of this event has been subject to a vivid debate: Archaeologists have proposed a low (c. 15th-century BCE) date for the eruption based on assumed archaeological cross links between the Aegean and Egypt, whereas radiocarbon dates resulted in a late 17th-century BCE date.

While the exact absolute date for this event is of limited interest for the scope of this workshop, the Santorini eruption is perhaps one of the most intensely studied historical events in the Bronze Age of the eastern Mediterranean, resulting in an exemplary amount of data from which, while the absolute year remains contested, the approximate season of the event can be deduced. This paper gives an overview of the archaeological data and methodological approaches to understanding seasonal resolution and discusses current assessments regarding the season of the eruption, including analyses of wind patterns vs. tephra distribution throughout the eastern Mediterranean, archaeozoological and archaeobotanical observations from the excavations of Akrotiri and potential visual offsets in the Mesopotamian Venus observations of Ammisaduqa.

The Complicated Problem of Seasonality at Classical Olynthos, Greece

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Time is a basic dimension in which archaeologists work; yet, although we are good at devising large-scale chronological schemes and sequences, less attention has been paid to smaller scales of chronological resolution. One reason for this has been practical: While the pace of cultural change in styles of architecture or artefacts supports investigation at the level of generational time, it is often impossible to devise a way to measure and interpret shorter-term change. Another factor has been a frequent tendency for archaeologists to create static snapshots of ancient environments – or to view them as a succession of snapshots, each one marked by sudden changes to the architecture and the cultural environment. An important question, then, is to what extent it is possible to create a truly dynamic and animated picture of change – one that integrates larger-scale, longer-term generational time with smaller-scale, shorter-term change at the level of a few years or even, in the terms of this conference, a few seasons. In this paper, I outline one approach to this challenge, which is currently being pursued in the context of household archaeology at the Classical Greek site of Olynthos by the Olynthos Project. I argue that a variety of scientific techniques enable us to detect the passing seasons, and that this provides an opportunity to revisit our approach to document and to understand the passage of time in archaeological contexts.

**New Evidence for the Date of the Eruption
of Mt. Vesuvius**

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Pompeian Houses and Seasonality: A Contextual Approach

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Recent, and not so recent, debates about when Mt Vesuvius erupted in 79 CE throw into question our understanding of when Pompeii was actually buried. If indeed it was buried much later in the autumn of 79 CE than generally thought, what impact does this have on our understanding of the households in Pompeii and of the seasonality of their daily activities? And how do the processes by which Pompeian houses have been excavated and recorded over several centuries impact on our ability to understand how domestic practices in these houses changed with the seasons?

This paper surveys the types of behaviour that were likely to have taken place on a seasonal basis in a Roman urban domestic context, such as in Pompeian houses – e.g. activities related to gardening, food storage, preparation and consumption, sleeping arrangements and bathing – with a particular focus on activities in late summer and autumn. It then surveys the ways in which various types of evidence that can be used to better understand seasonal activities in Pompeian households have been recorded. This applies particularly to the spatial arrangements of movable house contents and the recording of food remains. It assesses the limitations that the recording methods of the Pompeian excavations have placed on our ability to answer questions about the seasonality of Roman domestic behaviour and discuss how we might focus any further excavations and analyses of the 79 CE levels of Pompeian houses and their contents on addressing such questions.

Seasonality and Urban Economy: The Case of Gerasa in Jordan

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This paper is about the entangled relationship between seasons and urban economies in the Mediterranean. Human life is organised by time. One aspect of time is in most climate zones that of the shifting seasons, which have such a profound impact on people's lives that traces of seasonality are visible in the material culture (i.e. clothing, diet, activities). In pre-modern agricultural societies – and to an even larger extent in nomadic societies – life-patterns were heavily influenced by the seasons, as conveyed as early as, for example, in the writings of Hesiod's 'Works and Days'. Even if the impact of the seasons in urban societies would not have been as deep as on non-sedentary societies, for example, no urban society was independent of its agricultural hinterland and surrounding region and therefore also not of the seasons. Urban landscapes were entangled with the surroundings, and therefore seasonality was an underlying factor which directed many aspects of urban life. Here we begin a methodological investigation of complex urban situations which provide seasonal information, and we connect this evidence with considerations on ancient urban economies and the largely overlooked impact that the seasonal factor had on the economies indirectly. The processual character of archaeological evidence has been studied for decades, but too often, the seasons as constantly present and ever-changing factors in these processes have not been taken into account.

Solar Flare Events and High-Definition Datings in Archaeology

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The discovery of solar flare events observed in annual ^{14}C activity in tree-rings by Fusa Miyake in 2012 initiated large international research programmes to search for and verify these solar flare events back in time. It came as a surprise to most researchers that the sun is capable of ejecting particles with an energy high enough to produce ^{14}C nucleus in the earth's atmosphere. Thus, the frequency and energy of these events are important parameters for understanding the physics of suns, such as stars – not least because these solar flare events impose a high risk of disturbing our modern way of living.

The research on solar flare events using radiocarbon tree-ring records has therefore over the past decade produced a large volume of high-resolution records, which may also be used for the calibration of ^{14}C samples of archaeological interest. Though, in general, the agreement between new ^{14}C calibration records and older low-resolution records is good, there are periods where new and old ^{14}C records disagree. This may have a profound impact on how archaeological samples are interpreted.

An important example of this is an updated ^{14}C tree-ring sequence spanning the period 1700–1500 BCE which includes the Thera eruptions. For decades, the discrepancy between the radiocarbon-inferred age of early 17th- to 16th-century and the archaeological inferred age of mid-16th to early 15th-century age has been debated, and the new ^{14}C -calibrated record sets offer new insight for this debate. Here, the archaeological implication of the new high-resolution calibration curve is discussed through examples.

Seasonality and the Calendar in Ovid's Exile Poetry

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The cycle of the seasons, although it is a reality that is constantly experienced and shared by everyone, is just as constantly open to literary appropriation, manipulation or any kind of rhetorical stylisation. The Roman poet Ovid is acutely aware of the rhetorical potential of the seasons – especially, and perhaps surprisingly, in his exile poetry. Through the timeframe of the seasons in Tomis, Ovid is fully engulfed in the rough, hostile land of Tomis and his unhappy fate that it denotes. More than in almost any other work of ancient literature, the seasons mark the passage of time in these poems, underlining the sense of a 'narrative' that unfolds throughout the corpus and providing fairly tight-knit 'calendar' – one that is marked out as specifically belonging to Ovid's exile and this period in his literary career; his counting of the seasons only starts with the beginning of his exile. This timeframe communicates with the civil and religious calendar of Rome, as the passage of the seasons, for Ovid, is interspersed with his awareness of individual days in Rome. However, the somewhat perverted seasons in Tomis are but a very sorry replacement for the framework that used to govern the time in Ovid's great calendar poem, the *Fasti*.

By virtue of their universal character, the seasons also have a great potential to be mediators. They help Ovid synchronise his time in Tomis with the time in Rome but they also allow him to write himself into the long literary tradition of poems on the seasons, such as lyric poems on spring – a tradition that turns out to be reversed in what Ovid describes as the perverted climate of cold and hostile Scythia. Similarly, it becomes clear that there is no space in Ovid's exile poetry for pastoral or agricultural poetry, for which traditionally the accordance with the seasons is essential. The seasons allow Ovid to communicate some of his sentiments, while, as he hyperbolically declares, even the multiplicity of their products cannot match up with the amount of his grief. They provide Ovid with a highly expressive and versatile framework by which to structure his work and through which to communicate his eternal longing and feeling of isolation.

Seasonality of Timpone della Motta (Northern Calabria) during the Iron Age and the Archaic Period

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For decades, Danish archaeologists have been conducting research and archaeological excavations at and around the site of Timpone della Motta, near present-day Francavilla Marittima (northern Calabria). The research, which has been primarily funded by the Carlsberg Foundation and the New Carlsberg Foundation, is currently coordinated through the Danish Institute in Rome under the direction of Gloria Mittica within the framework of the Carlsberg Foundation project 'The Sphere of the Divine - Religious Transformations of the Timpone della Motta in its Western Mediterranean Setting'. Additional excavations have been conducted in a cave (Grotta del Caprio) close to Timpone della Motta in collaboration with the Centro Regionale di Speleologia 'Enzo dei Medici' under the scientific coordination of Felice Larocca.

Timpone della Motta holds an important position in Italian archaeology with notable relevance for the study of material and cultural transformations from the Middle Bronze Age 2 (MBA2) to the end of the Archaic period (c. 1700 BCE–500 BCE).

Bringing together recent results of investigations at the site's different contexts and related locations, the present presentation focuses on seasonality from two point of views, both relating to the Iron Age and Archaic period:

- 1: Seasonality as reflected in the transhumance with special emphasis on sheep and textile production on Timpone della Motta during the 8th and 7th century BCE.
- 2: Seasonality in ritual activities within the sanctuary on the summit of Timpone della Motta as well as in caves and on mountain tops in its hinterland during the Iron Age and Archaic period.

The Sanctuary of Jupiter Dolichenus at Doliche and the Seasonality of Sacrifice

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Jupiter Dolichenus was among the most important deities of the Roman Imperial period. His cult was popular with Roman soldiers and is attested in many regions of the Roman Empire. Originally, Jupiter Dolichenus was the main god of Doliche – a city in the very north of ancient Syria which today is part of Turkey. The main sanctuary is located on the summit a mountain, the Dülük Baba Tepesi, which overlooks the ancient city. Recent excavations have revealed that the origin of the sanctuary dates back to the early first millennium BCE. From the early phase of the sanctuary, substantial deposits of votive offerings and sacrificial remains have been recovered. The analysis of these remains allows for the reconstruction of seasonal rituals. The main conclusion is that one large festival with massive holocaustic sacrifices took place every year. Sacrificial remains from the Roman period suggests that this tradition was still alive in the Roman period. In my talk, I discuss and contextualise the evidence for seasonal rituals and festivals at the sanctuary.

Speakers

Penelope M. Allison

Penelope Allison is Professor of Archaeology at the School of Archaeology and Ancient History, University of Leicester. She is a Fellow of the Society of Antiquaries, London, and of the Australian Academy of Humanities; a Senior Fellow of the Higher Education Academy; and Corresponding Member of the American Institute of Archaeology. Her research focuses on household archaeology and gender and space in Roman urban and military contexts as well as in Australian historical archaeology. Her most recent research concerns using Roman pottery to investigate social interaction around eating and drinking in the Roman world. She also has a keen research interest in digital applications in archaeology and archaeological publication. Her major publications include: *The Archaeology of Household Activities* (Routledge, 1999); *Casa della Caccia Antica, Häuser in Pompeji vol 11* (co-authored with Frank Sear – Hirmer, 2002); *Pompeian Households: An Analysis of the Material Culture* (The Cotsen Institute of Archaeology at UCLA, 2004, reprinted 2005); *The Insula of the Menander in Pompeii III: The Finds, a Contextual Study* (Clarendon Press, 2006); and *People and Spaces in Roman Military Bases* (Cambridge University Press, 2013). She has held research fellowships at the University of Sydney and the Australian National University; visiting fellowships in the Faculty of Classics, University of Cambridge, and at St John's College, University of Durham; and a Harold White Fellowship at the National Library of Australia.

Michael Blömer

Michael Blömer is an archaeologist whose research revolves around Asia Minor and the Near East in the Hellenistic and Roman period. He has worked on urbanism, sculpture, religious iconography and the religious life of the Hellenistic and Roman Near East. Michael is also an experienced field archaeologist and co-director of the excavations at Doliche, south-east Turkey. He received his DPhil from Münster University in 2009. Since then, he has worked as a research fellow at the Centre of Excellence 'Religion and Politics' at Münster University and took up a position as Assistant Professor at the Centre for Urban Networks Evolutions (UrbNet) at Aarhus University in 2015.

Felix Höflmayer

Felix Höflmayer studied Egyptology and Classical Archaeology at the University of Vienna and joined the Austrian Academy of Sciences in 2006, and he completed his PhD thesis in 2010 in the framework of the SCIEM 2000 project. In 2009, he joined the Orient Department of the German Archaeological Institute, first in Amman (Hashemite Kingdom of Jordan) from 2009 to 2011 and later in Berlin (Germany) from 2011 to 2013. From 2013 to 2015, he was a postdoctoral fellow at the Oriental Institute of the University of Chicago. In 2015, he received an APART Fellowship of the Austrian Academy of Sciences and returned to Vienna. In 2016, he was awarded the START grant of the Austrian Science Fund (FWF) for 'Tracing Transformations'. Felix teaches at the Institute of Old Testament Studies and Biblical Archaeology, Institute of Oriental Studies and the Institute of Egyptology, University of Vienna. His research interests include chronological questions of the Early, Middle and Late Bronze Ages throughout the eastern Mediterranean (including the eruption of Santorini). Currently, he co-directs the Austrian-Israeli excavations at Tel Lachish (Israel) together with Dr. Katharina Streit of the Hebrew University of Jerusalem.

Jan Kindberg Jacobsen

Jan Kindberg Jacobsen is Associated Researcher at the Centre for Urban Network Evolutions (UrbNet) at Aarhus University and Curator of Ancient Art at the Ny Carlsberg Glyptotek, Copenhagen. He directs the Danish research group involved in the excavations of the Forum of Caesar and is the overall director of the scientific research conducted in Francavilla Marittima by the Danish Institute in Rome. He graduated in Classical Archaeology from Aarhus University and later obtained a PhD degree from the University of Groningen. Jan has conducted archaeological research in Italy, Greece, Cyprus and in the Black Sea Region and has curated a number of international temporary exhibitions at the Ny Carlsberg Glyptotek, Copenhagen.

Felice Larocca

Felice Larocca is a prehistoric archaeologist and a leading specialist of Italian cave archaeology and the Director of the Centro Regionale di Speleologia 'Enzo dei Medici'. He graduated from the University of Bari and later completed a doctoral thesis from the same university. Felice has directed – and currently directs – several cave excavations in Italy, among these in the Grotta della Monaca at Sant'Agata di Esaro between 2000 and 2012. He is the author of more than 60 articles and monographs on cave archaeology. Since 1985, he has been Curator of the Catasto delle Grotte della Calabria on behalf of the Società Speleologica Italiana.

Achim Lichtenberger

Achim Lichtenberger (DPhil 2001, University of Tübingen) is Professor of Classical Archaeology and Director of the Archaeological Museum at Münster University, Germany. Together with Rubina Raja, he co-directs the Danish-German Jerash Northwest Quarter Project. His research interests are the Hellenistic to Late Antique Near East, numismatics and ruler representation.

Gloria Mittica

Gloria Mittica is a classical archaeologist associated with the Danish Institute in Rome and the Centre of Urban Network Evolutions (UrbNet) at Aarhus University. Since 2017, she has been acting as Field Director of the excavations conducted by the Danish Institute in Rome at Francavilla Marittima, and she is a member of the research team engaged in the Italo-Danish excavations at the Forum of Caesar in Rome. She graduated from the University of Calabria in 2007 and finished her specialisation degree from the University of Salento in 2009. Gloria has supervised excavations and research projects in Southern Italy on behalf of foreign universities as well as the Italian Ministry of Culture and Tourism, and she has published extensively on topics relating to Magna Graecia and the Italian Iron Age of Southern Italy.

Lisa Nevett

Lisa Nevett is a classical archaeologist whose research focuses on the built environment of the ancient world. Most of her work has been centred on domestic architecture: She has used the construction, decoration and articulation of space within houses to shed light on broader social questions (for example in her books *House and Society in the Ancient Greek World*, 1999, and *Domestic Space in Classical Antiquity*, 2010). In recent years, she has developed a more multi-scalar approach, contextualising households within their neighbourhoods, districts and settlements. A major component of this shift has been the initiation in 2014 of a field project at Olynthos in northern Greece jointly with Bettina Tsigarida and Zosia Archibald, under the auspices of the Greek Archaeological Service and the British School at Athens (a preliminary article on the project appears in the *Annual of the British School at Athens* for 2017). Nevett's belief in the importance of a rigorous approach to the archaeological evidence has also led to an interest in theory and methodology in classical archaeology (as editor of *Theoretical Approaches to the Archaeology of Ancient Greece*, 2017; and co-editor, with James Whitley, of *An Age of Experiment: Classical Archaeology Transformed (1976–2014)*, 2018).

Jesper Olsen

Jesper Olsen is Associate Professor at Department of Physics and Astronomy and Director of the Aarhus AMS Centre (AARAMS). His research is focused around using cosmogenic isotopes (radiocarbon, ¹⁰Beryllium and ²⁶Alluminium) for constructing chronologies in archaeological and environmental contexts.

Massimo Osanna

Massimo Osanna has been the general director of the Parco Archeologico di Pompei since 2016. Prior to that, he directed the Speciale delle Aree Archeologiche di Pompei, Ercolano e Stabia. (2014–2016). He currently holds a professorship in Classical Archaeology at the Università degli Studi di Napoli Federico II (since 2015) and is the former director of the Scuola di Specializzazione in Archeologia dell'Università degli studi della Basilicata. Massimo Osanna has published numerous articles and monographs on a wide range of topics in Italian archaeology from prehistory to the Roman Imperial period. In addition, he has directed archaeological excavations of central importance for south Italian archaeology, among these at Torre di Satriano.

Rubina Raja

Rubina Raja (DPhil 2005, University of Oxford) is Professor of Classical Archaeology at Aarhus University, Denmark, and Center Director of the Danish National Research Foundation's Centre of Excellence for Urban Network Evolutions. Since 2011, she has co-directed the Danish-German Jerash Northwest Quarter Project together with Professor Achim Lichtenberger. Her research interests include the regions of the Near East from the Hellenistic to the medieval periods, high-definition archaeology and the intersection between archaeology and natural sciences, iconography and portrait studies, as well as history of religion in the Roman world. She also heads the Palmyra Portrait Project, the Ceramics in Context project and co-directs the Italo-Danish excavations of Caesar's Forum in Rome together with Dr. Jan Kindberg Jacobsen, all funded by the Carlsberg Foundation.

Steve Rosen

Steve Rosen is the Canada Chair of Near Eastern Archaeology at Ben-Gurion University of the Negev. He received his BA degree in mathematics and anthropology from the University of California at Berkeley and his MA and PhD degrees from the department of anthropology at the University of Chicago. He worked for 8 years as a field archaeologist for the Archaeological Survey of Israel in the Negev before joining the faculty of Ben-Gurion University in 1987. His research interests include the archaeology of mobile pastoralists, Levantine prehistory, the analysis of chipped stone tools, and desert archaeology with a focus on the Negev. His latest book is *Revolutions in the Desert: The Rise of Mobile Pastoralism in the Negev and the Arid Zones of the Southern Levant* (Routledge, 2017).

Erica Rowan

As an archaeologist with a specialisation in Roman archaeology and archaeobotany, Erica Rowan works on the formation and evolution of ancient cultural identities and economic developments through an examination of Roman foodways. Her research centres on ancient consumption practices, the evolution of food identities, sensory experiences of diet and economies of production. In addition to her published DPhil research on the food remains from a sewer in Herculaneum, she has published on the use of olive pressing waste as a fuel source, the food economy in the Bay of Naples and recently on the consciousness of food origins in the Roman world. In conjunction with her current research, She serves as the environmental specialist on excavations at Aphrodisias and Sardis (Turkey) and at Orvieto and the Villa d'Orazio in Vacone (Italy).

She holds a BA in Classics and a BSc in Health Sciences from McMaster University in Canada. In 2009, she completed her MSt in Classical Archaeology, and in 2014, she was awarded her DPhil in Archaeology, both from the University of Oxford. In September 2014, she took up the two-year post of Leventis Associate Research Fellow at the University of Exeter, and following the fellowship, she spent a year at Exeter as a teaching fellow. She joined Royal Holloway in September 2017 as a new lecturer in Classical Archaeology.

Werner Tietz

Werner Tietz (DPhil, Universität Tübingen, 2001) is Professor of Ancient History at Cologne University, Germany. His current research interests include various aspects of Roman social and economic history as well as processes of social formation in early Italy as well as Greece. He currently co-directs a research project on the structure and impact of the network of Roman villas around Lake Garda in northern Italy (together with Professor Andreas Grüner, Erlangen University) and is in the process of preparing a book on agriculture and land as a primary motive for political action in the Roman Republic.

Anke Walter

Dr Anke Walter is Lecturer in Classics at Newcastle University. Previously, she held a post as an Assistant Professor in Classics at Rostock in Germany. Her primary research interests are the construction of time in ancient literature, stories of origin, and ancient (especially Latin) epic poetry. She completed her PhD in Heidelberg in 2011 with a thesis on storytelling in Flavian epic (published as *Erzählen und Gesang im flavischen Epos*, Berlin, 2014). Her second monograph, *Time in Ancient Stories of Origin*, based on her 'Habilitation' from Rostock, is forthcoming with Oxford University Press next year. Anke has co-edited volumes on the narrative structures of stories of origin as well as on ancient narrative and exemplarity. Currently, she is preparing a research project on festive days and annual holidays in Latin literature.

Will Wootton

Will Wootton is Senior Lecturer in Roman Art at King's College London. He is a specialist in ancient craft production, focusing on the interactions between materials and techniques, craftsmen and patrons, and the impact of time, place and society on things made. He has excavated widely and is involved in research which crosses the disciplinary boundaries of archaeology, art history, digital humanities and contemporary heritage matters – his projects reflect these interests. He was the Principal Investigator on the Leverhulme-funded *The Art of Making in Antiquity: Stoneworking in the Roman World* (see www.artofmaking.ac.uk). He also directed the heritage project *Conserving and Managing Mosaics in Libya*, funded by the Getty Foundation. He has been involved in the creation of the *Heritage Gazetteer of Libya* (see <https://www.sls gazetteer.org>) and is currently Co-director of *Training in Action: From Documentation to Protection of Cultural Heritage in Libya and Tunisia*, funded by the British Council, where he leads on capacity building in conservation, heritage management and community engagement (see <http://www.traininginaction.org>). He also co-directs the *Ancient Itineraries* project (see <https://ancientitineraries.org>) which seeks to explore the 'digital' as it applies to art history.





Details of oil press found in trench B in the Northwest Quarter in Gerasa (Photo: The Danish-German Jerash Northwest Quarter Project).



Venues



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Conference website

<http://urbnet.au.dk/news/events/2019/seasonality/>

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Note: We will take photographs during the conference, which we store and use for e.g. reporting purposes. If you do not want us to use photos in which you are depicted, please contact Christina Levisen: levisen@cas.au.dk.

Notes



The Archaeology of Seasonality, 17–18 October 2019

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Organisers: Achim Lichtenberger (Westfälische Wilhelms-Universität Münster)
Rubina Raja (Aarhus University)

Book of Abstracts
Editors: Christina A. Levisen, Achim Lichtenberger and Rubina Raja

Front cover: Temple of Zeus Olympios in Gerasa
(Photo: The Danish-German Jerash Northwest Quarter Project).

Back cover: The Artemis Sanctuary in Jerash seen from the south
(Photo: The Danish-German Jerash Northwest Quarter Project).

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