

# UrbNet Annual Report 2017

A Centre of Excellence funded by  
the Danish National Research Foundation

Hosted by Aarhus University





Test trenches in a Roman bath complex, Doliche, Turkey (Photo: Michael Blömer).

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# Greetings from the Director

It is my great pleasure to present the 2017 annual report of the Danish National Research Foundation's (DNRF) Centre of Excellence for Urban Network Evolutions (UrbNet), grant no. 119.

2017 was a year of consolidation for UrbNet. A total of 28 new positions were filled, and we welcomed to the UrbNet team 2 assistant professors, 4 postdoctoral fellows, 4 PhD students, 7 research assistants, 1 lab technician, 2 short-term visiting researchers, 9 student assistants and 1 trainee. With a further few additions in 2018, these employments mark the completion of our original hiring plans for the first round of the centre, and throughout the year, our focus has been directed at solidifying individual efforts towards the furthering of UrbNet's joint research agenda aiming at understanding urban networks and dynamics of past societies through high-definition archaeology.

We took home (as lead or co-lead) almost 5 million DKK in new project funds and ran (as lead or co-lead/partner) external projects – either newly launched or carried on – funded with almost 50 million DKK in total. We hosted 11 conferences, 5 workshops, 5 lecture series, 4 PhD courses, 32 lectures and gave 153 invited lectures. 135 scientific publications appeared, authored or co-authored by UrbNet researchers.

## 2nd and 3rd UrbNet agenda conferences

In 2017, we hosted the two remaining UrbNet agenda conferences, i.e. Network Evolutions (18–20 January) and High-Definition Narratives (15–17 November). The former focused on exploring how scientific techniques can be integrated with contextual archaeological and historical approaches to form a high-definition view of urban dynamics in the past. The latter went on to explore how the conceptual promise and challenges offered by high-

definition approaches can change the practice and interpretations of urban archaeology.

The two conferences featured a number of prominent experts from Europe, the U.S. and Australia as well as UrbNet scholars, each of whom presented their take on how to push traditional concepts, rethink the use of methodologies and contribute towards building new analytical frameworks in and across disciplines from the humanities and natural sciences. In total, three separate conference volumes are forthcoming.

## Education and talent development

One of the key components of the original UrbNet plan was to develop an educational programme, and in 2017, UrbNet took on the role as partner in a large-scale ERASMUS+ initiative that set out to build an online teaching/learning platform around the topic of the ancient city: *Ancient Cities: Creating a Digital Learning Environment on Cultural Heritage (AnCit)*. The project is a collaboration between 6 European institutions: Kiel University (main coordinator), Aarhus University (represented by UrbNet and Centre for Teaching Development and Digital Media), University of Bergen, University of Birmingham, Paris 1 Panthéon-Sorbonne University and The Open University of The Netherlands. The online modules are currently under development, and the first AnCit spring school was held in February 2018 in Paris.

Apart from partnering in the ERASMUS+ project, UrbNet developed and hosted a number of PhD courses throughout the year. These courses, also advertised as part of the Graduate School of Arts at Aarhus University as well as within the framework of the Nordic PhD school *Dialogues with the Past (DialPast)*, attracted both national and international participants and demonstrated without



Double loculus relief depicting mother and daughter (Photo: Ny Carlsberg Glyptotek, Copenhagen).

doubt that UrbNet is a pioneer in reforming archaeology and archaeological sciences as well as advancing the use of geoscience and physics in approaching and analysing archaeological materials.

### Outreach

As part of UrbNet's outreach programme in 2017, a couple of initiatives deserve special mention: the lecture series *Forsvundne Byer* was held at the Danish University Extension (Folkeuniversitetet) in both Aarhus and Emdrup and featured six lectures on societies of the past, based on studies of bygone cities attested at archaeological sites, which facilitated urban encounters, trade and events that changed the course of history.

We also organised a lecture series, *Urban Network Evolutions*, which was held at the Danish Institute in Athens, also consisting of six lectures on the development of urban networks and the way in which urban encounters catalysed societal and cultural changes. The lectures were structured around UrbNet's geographical focus contexts – the Middle East, Africa and Northern Europe – as well as different types of evidence/finds – ceramics, metal and water management.

Finally, within the framework of the externally funded project *Danish-German Jerash Northwest Quarter Project*, we produced an exhibition at the Museum of Ancient Art (Aarhus), entitled *Jerash – Et dansk-tysk udgravningsprojekt*, which focused on the archaeological excavations undertaken in the ancient city Gerasa, present-day Jerash in Jordan, based on studies in the Northwest Quarter of the city, which have – and continue to – shed light on the settlement history of an urban site that flourished during the Roman and Early Islamic period. The exhibition was accompanied

by a book, which showcased the research undertaken within the project to the broader academic community and the public.

### Outlook and acknowledgements

As a centre of excellence, UrbNet is in a unique position; we have been offered the time, the means and the facilities to stake our concentrated, large-scale efforts on delving into the studies of past societies and networks and their dynamics. And by analysing the emergence and development of these, we are able to refine our understanding of historical events – and sometimes even rewrite history as we know it – and shed light on the conditions and circumstances that led to the formation of different types of clusters and the forces that eventually drove cities to rise or fall. By following the historical traces afforded to us in the form of archaeological material, we find a window to a past that ultimately lets us recognise today's cultural identities, religious traditions, political trends and ways of thinking as fusions of historical complexity.

Finally, I – as director of UrbNet – am extremely thankful for the tireless efforts by the centre employees and all of our collaborators, whose competent and dedicated efforts cover all of the academic fields that UrbNet spans.

Rubina Raja





Hops (*Humulus lupulus*) (Photo: Neeke Hammers).

# UrbNet Mission Statement

Centre for Urban Network Evolutions (UrbNet) explores the archaeology and history of urban societies and their networks from the Ancient Mediterranean to medieval Northern Europe and to the Indian Ocean World.

We are an interdisciplinary research initiative, which integrates new methods from contextual cultural studies rooted in the humanities with the natural sciences.

Approaching urbanism as a network dynamic, we aim to develop a high-definition archaeology to determine how urban networks catalysed societal and environmental expansions and crises in the past.



Group photo, UrbNet retreat at the Danish Institute in Rome, January 2018 (Photo: UrbNet).

# Staff

## Senior core group



**Rubina Raja**  
Professor, Centre director  
School of Culture and Society, Aarhus University

Rubina Raja's research focuses on urban societies and their manifestation in material and written culture, particularly in the eastern Mediterranean and the Levant. She takes a special interest in regional and interregional patterns from the Hellenistic to the early medieval period.



**Søren M. Sindbæk**  
Professor MSO, Deputy director  
School of Culture and Society, Aarhus University

Søren M. Sindbæk's research focuses on early urbanism and urban archaeology in Viking-age Scandinavia and early medieval Europe. He has a special interest in early medieval communication and social networks.



**Bjørn Poulsen**  
Professor  
School of Culture and Society, Aarhus University

Bjørn Poulsen's work revolves around Viking-age and medieval Denmark/northern Europe with respect to cultural, social and economic history. He specialises in towns, trade networks, town-country relations and agriculture.



**Charles Leshner**  
Niels Bohr Professor  
Department of Geoscience, Aarhus University

Charles Leshner's research revolves around geochemistry and experimental petrology, and he is an expert in Plasma Mass Spectrometry and volcanic rocks. He is Niels Bohr Professor and director of the Danish Interdisciplinary Center for Plasma Mass Spectrometry (DK-ICPMS).



**Søren M. Kristiansen**  
Associate professor  
Department of Geoscience, Aarhus University

Søren M. Kristiansen's work revolves around soils, and he works across a wide range of scientific and professional fields, including geoarchaeology, soil science, groundwater chemistry, medical geology, soil chemistry and geomorphology.





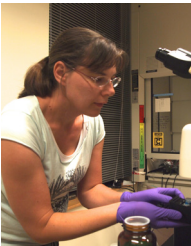
Palmyrene tower tombs and stretches of colonnaded streets with consoles visible on the lower half of the columns (Photo: Rubina Raja).



**Jesper Olsen**

Associate professor  
Department of Physics and Astronomy, Aarhus University

Jesper Olsen's research focuses on radiocarbon and stable isotopes. He specialises in a number of statistical methods used in earth/archaeological sciences, including  $^{14}\text{C}$  analysis, and he is director of the Aarhus AMS  $^{14}\text{C}$  Dating Centre (AARAMS).



**Gry H. Barfod**

Assistant professor  
Department of Geoscience, Aarhus University

Gry H. Barfod specialises in isotope geochemistry and geochronology. Her work applies trace metals (Hg, Pb, As) and non-traditional isotope systems (e.g. Fe) to medical and archaeological sciences.



**Peter H. Mikkelsen**

Head of Department and Vice-Director  
Department of Conservation and Natural Science, Moesgaard Museum

Peter H. Mikkelsen is an expert in archaeobotany, and his work focuses mainly on Iron-age and medieval agriculture and consumption.



**Stephanie Wynne-Jones**

Lecturer  
Department of Archaeology, University of York

Stephanie Wynne-Jones specialises in material culture and its relationship with practice. Her research focuses on craft and production for trade as well as daily life and the use of space at Songo Mnara where she uses scientific techniques to create a high-resolution picture of life in the town.



Glass fragments from the excavation in Ribe (Photo: Museum of Southwest Jutland).

## Assistant professors



**Heike Möller** (1 January–31 August 2017)

Assistant professor (*Ceramics in Context*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Heike Möller is a pottery specialist whose research focus is Roman to Early Islamic pottery and trade networks in the Mediterranean. She has worked on many sites in Egypt, Tunisia, Turkey and Greece. During her employment in the *Ceramics in Context* project, she studied pottery production patterns in Jordan.



**Michael Blömer** (1 January–31 December 2017)

Assistant professor  
School of Culture and Society, Aarhus University

Michael Blömer's research focuses on urbanism, sculpture and religious iconography in Asia Minor and the Roman Near East. He has a long record of experience in field archaeology – most notably in relation to the excavation of the Iuppiter Dolichenus sanctuary near Doliche in South-East Turkey.



**Signe Krag** (1 January–31 December 2017)

Assistant professor (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Signe Krag's research focuses on the representation of Palmyrene women as well as the family structures of Palmyra. Her work is primarily based on funerary sculpture from the 1st century BCE to the 3rd century CE.



**Luise Ø. Brandt** (1 January–31 December 2017)

Assistant professor (Individual Postdoctoral Fellowship, funded by the Carlsberg Foundation and UrbNet)  
School of Culture and Society, Aarhus University

Luise Ø. Brandt is a prehistoric archaeologist, focusing on the analysis of DNA and proteins from archaeological textiles and skins. She is particularly interested in how the natural sciences can be applied to archaeological questions.



**Federica Sulas** (1 January–31 December 2017)

Assistant professor  
School of Culture and Society, Aarhus University

Federica Sulas's research deals with the responses of people and landscapes to environmental and social change over time, interpreting the impact of such processes on past urban dynamics and system resilience and exploring how this knowledge may inform on present and future challenges.



Representation of priest flanking the staircase to temple A in Niha, Lebanon (Photo: Rubina Raja).



**Thomas Birch** (1 January–31 December 2017)  
Assistant professor  
School of Culture and Society, Aarhus University

Thomas Birch studies and scientifically analyses artefacts and materials from archaeological sites to learn about their origin and past technologies, aiming to understand how material assemblages influence and are influenced by the evolution of urban networks.



**Sarah Croix** (1 February 2017–31 December 2017)  
Assistant professor  
School of Culture and Society, Aarhus University

Sarah Croix specialises in Viking-age and early medieval archaeology in northwestern Europe. She has worked extensively with the emergence of early Ribe and is currently preparing the publication of Ribe's earliest cemetery. She is now involved in the *Northern Emporium* project, focusing on stratigraphic 3D documentation and analysis.



**Christopher Dickenson** (1 October–31 December 2017)  
Assistant professor  
School of Culture and Society, Aarhus University

Christopher Dickenson researches the public spaces of the cities of the Roman Empire. Having previously worked on the cities of Greece, he is now expanding his focus to compare the use and meaning of public space in different parts of the Empire and to find new ways of using archaeology to investigate the nature of publicness.



Excavation leader Claus Feveile during the Northern Emporium excavation (Photo: Museum of Southwest Jutland).



Triple loculus relief from Palmyra, depicting two men and a girl (Photo: Ny Carlsberg Glyptotek, Copenhagen).

## Postdocs



**Genevieve Holdridge** (1 January–31 December 2017; incl. maternity leave)

Postdoc  
Department of Geoscience, Aarhus University

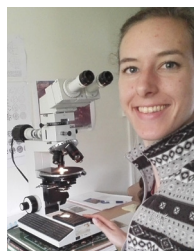
Genevieve Holdridge holds two Master degrees in Art History and Archaeology and received her doctorate in Geography from the University of Georgia, Athens GA. She has experience in Mediterranean archaeology, geoarchaeology, fluvial geomorphology and paleoclimatology.



**Vana Orfanou** (1 January–31 December 2017)

Postdoc  
Department of Geoscience, Aarhus University

Vana Orfanou is an archaeologist who specialises in archaeometry, namely the scientific analysis of artefacts, tools and technological by-products, with the aim of contextualising past technologies and understanding behavioural patterns.



**Barbora Wouters** (2 June–31 December 2017)

Postdoc (*Northern Emporium*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Barbora Wouters is a geoarchaeologist and micromorphologist specialised in towns of the 1st millennium CE. Her primary interest is the emergence and development of early medieval towns, such as emporia, in Northwest Europe.



**Bente Philippsen** (1 July–31 December 2017)

Postdoc  
Department of Physics and Astronomy, Aarhus University

Bente Philippsen specialises in scientific methods in archaeology, especially radiocarbon dating and stable isotope analyses. She is based at the Aarhus AMS 14C Dating Centre (AARAMS).



**Pieterjan Deckers** (1 October–31 December 2017)

Postdoc (*Northern Emporium*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Pieterjan Deckers works with artefactual evidence from the *Northern Emporium* excavation in Ribe, focusing on how flows of things, both exotic and mundane, constituted urban life and connected the town with the outside world, in particular the maritime network of 8th–9th-century emporia across the North and Baltic Seas.



View of stretch of colonnaded street in Palmyra, Syria (Photo: Rubina Raja).

## PhD students



**Neeke M. Hammers** (1 January–31 December 2017)

PhD student  
School of Culture and Society, Aarhus University

Neeke Hammers's project takes an archaeobotanical approach to the interpretation of network connections and urban development in northern Europe during medieval times based on archaeobotanical remains from urban contexts.



**Alex H. Peterson** (1 January–31 December 2017)

PhD student (*Ceramics in Context*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Alex Peterson's project aims to better understand the settlement history and ceramics of the Middle Islamic period in the Northwest Quarter of Jerash, Jordan. By taking a contextual approach, this project hopes to develop a more holistic synthesis of this less well understood period of history.



**Hanna Dahlström** (1 January–31 December 2017)

PhD student (*Urban Encounters: Mobility, Migration and Networks in Premodern Scandinavia Project*, funded by the Velux Foundation, Museum of Copenhagen and UrbNet)  
School of Culture and Society, Aarhus University

Hanna Dahlström's project focuses on early urban development in Copenhagen through a view of urbanity as practice. Hanna explores the activities, people and networks that have been important in the early development of Copenhagen, and how urban ways of life emerge.



**Kirstine Haase** (1 January–31 December 2017)

PhD student (*Urban Encounters: Mobility, Migration and Networks in Premodern Scandinavia Project*, funded by the Velux Foundation, Odense City Museums and UrbNet)  
School of Culture and Society, Aarhus University

Kirstine Haase's project is based on recent excavations in Odense. Analyses focus on artefact biographies and urban practices based on material culture, e.g. building patterns, refuse patterns, use and depositing of animal bone.



**Kristine Thomsen** (1 January–31 December 2017)

PhD student  
School of Culture and Society, Aarhus University

Kristine Thomsen's project combines Classical Archaeology with geochemical methods. The excavation in Jerash, Jordan, is the focal point of the project, and Kristine tries to understand the complex urban space and development through geochemistry.



View over modern Jerash, Jordan, from the Northwest Quarter of the city (Photo: Danish–German Jerash Northwest Quarter Project).



**Olav E. Gundersen** (1 January–31 December 2017)  
PhD student  
School of Culture and Society, Aarhus University

Olav E. Gundersen's project analyses numismatic material in order to see what it can tell us about the commercialisation of Norwegian, Danish and Swedish society c. 1000–1450 CE, and how it was affected by urban growth.



**Ema Bauzyté** (1 January–31 December 2017)  
PhD student  
School of Culture and Society, Aarhus University

Ema Bauzyté's project focuses on the East-Africa Swahili Coast and attempts to reconstruct ancient iron extraction and working techniques employed in Antiquity as well as devise a methodology for tracing the provenance of raw materials used for iron production in the area.



**Sara Ringsborg** (1 January–31 December 2017)  
PhD student (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Sara Ringsborg's project is an integrated part of the *Palmyra Portrait Project*, and she undertakes research on the funerary portraits of children from Roman-period Palmyra.



**Julia Steding** (1 January–31 December 2017)  
PhD student (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Julia Steding's project is conducted within the framework of the *Palmyra Portrait Project*, focusing on questions relating to the production economy of funerary portraits from Roman-period Palmyra.



**Mahir Hrnjic** (1 September–31 December 2017)  
PhD student  
School of Culture and Society, Aarhus University

Mahir Hrnjic's project aims to study the provenance of Viking-age silver in order to understand the development of the early medieval long-distance trading networks in Eurasia. The project bridges archaeology and the natural sciences by applying chemical and isotope analysis.



Local workers partaking in the excavation in Jerash, Jordan (Photo: Danish-German Jerash Northwest Quarter Project).



**Pernille L. K. Trant** (1 September–31 December 2017)

PhD student

Department of Geoscience, Aarhus University

As a geologist, Pernille L. K. Trant specialises in geochemistry and radiocarbon dating, and her project focuses on using a geochemical approach to investigate early urban spaces in Denmark.



**Johan S. Larsen** (1 December–31 December 2017)

PhD student (Research assistant 1 August–30 November 2017)

School of Culture and Society, Aarhus University

Johan S. Larsen's project critically assesses past and current field methods utilised by archaeologists when excavating towns, with the aim of proposing an optimised methodology that encompasses the current technological advances and prepares for the next step in archaeology.



View of the Temple of Bel in Palmyra, Syria (Photo: Rubina Raja).



View of the Oval Piazza and Sanctuary of Zeus in Jerash, Jordan (Photo: Danish-German Jerash Northwest Quarter Project).

## Other academic employees



**Eva Mortensen** (1 January–31 December 2017)  
Research assistant  
School of Culture and Society, Aarhus University

Eva Mortensen has a PhD in Classical Archaeology and works as a research assistant primarily with the historiography of the Levant. Based on archival research, she explores the early explorers of the region through their travel accounts, diaries, sketches and drawings and through old photographs and maps.



**Erin J. Rosenberg** (1 January–25 September 2017)  
Research assistant  
Department of Geoscience, Aarhus University

Erin Rosenberg's academic background is in isotope and trace element geochemistry. She holds an MSc in Earth Sciences from Dartmouth College (USA) and a BSc in Geosciences with an emphasis in Geochemistry and a minor in Planetary Sciences from the University of Arizona (USA).



**Mie E. Lind** (3 May–31 December 2017)  
Research assistant  
School of Culture and Society, Aarhus University

Mie E. Lind has an MA in Classical Archaeology from Aarhus University. In her MA thesis, she worked with the relations between the living and the dead through memory and social identity represented in grave iconography in Alexandria, Egypt.



**Olympia Bobou** (1 June–31 December 2017)  
Research assistant (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

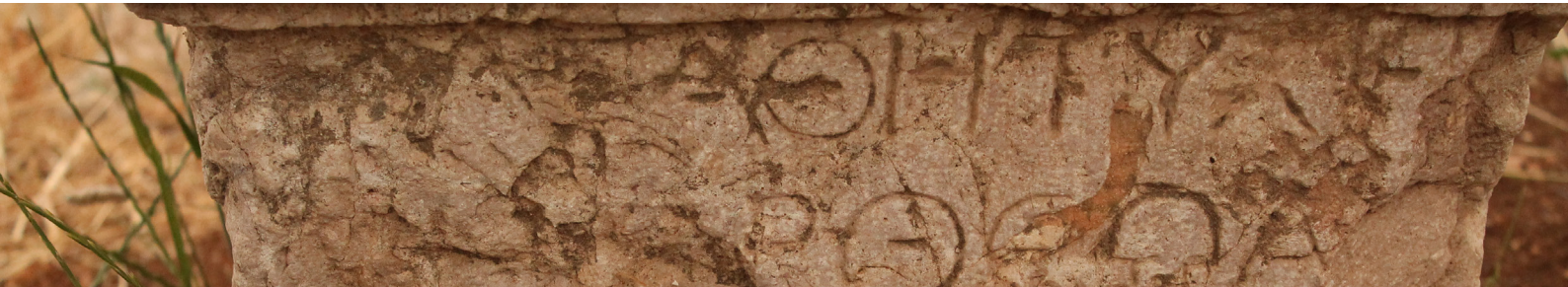
Olympia Bobou holds a DPhil in Classical Archaeology from University of Oxford and has been working within the *Palmyra Portrait Project* since June 2017. Her main task is to work on the catalogue of the funerary sculptures, based on the online database entries.



**Christian S. L. Jørgensen** (19 June–31 December 2017)  
Research assistant (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Christian S. L. Jørgensen holds an MA in Classical Archaeology from University of Copenhagen and has been working within the *Palmyra Portrait Project* since late June 2017. Based on the online database, his main task is to work on the catalogue of the funerary sculptures.





Close-up of Greek inscription on altar in Jerash (Photo: Rubina Raja).



**Line Egelund** (15 July–31 December 2017)  
Research assistant  
School of Culture and Society, Aarhus University

Line Egelund has an MA in Classical Archaeology from Aarhus University. Her MA thesis focused on the House of the Tesserae (excavated by the *Danish-German Jerash Northwest Quarter Project*) and the continuities and changes in the domestic architecture in the Near East from the Roman period to 749 CE.



**Mikkel F. Schou** (1 September–31 December 2017)  
Research assistant  
Department of Physics and Astronomy, Aarhus University

Mikkel F. Schou holds an MSc in Physics from Aarhus University. He works with Postdoc Bente Phillipson on the adjustment of the atmospheric  $^{14}\text{C}$  calibration curve from decadal to annual resolution for two separate periods spanning 200 years in total.



**Rikke R. Thomsen** (6 November–31 December 2017)  
Research assistant (*Palmyra Portrait Project*, funded by the Carlsberg Foundation)  
School of Culture and Society, Aarhus University

Rikke R. Thomsen holds an MA in Classical Archaeology from Lund University and has been working within the *Palmyra Portrait Project* since November 2017. Her main task is to work on the catalogue of the funerary sculptures, based on the online database entries.



**Charlotte H. K. Christensen** (6 November–3 December 2017)  
Intern  
School of Culture and Society, Aarhus University

Charlotte H. K. Christensen was an intern at UrbNet for a month, during which she worked on database entries and literature searches. Charlotte returned to UrbNet in 2018 where she has taken up a wage-subsidy job.



Trench V (Umayyad domestic structure) during excavation (Photo: Danish-German Jerash Northwest Quarter Project).

## Visiting researchers



**Annalisa Marzano** (1–31 May 2017)

Professor (Visiting researcher grant from Aarhus University Research Foundation)  
University of Reading

Annalisa Marzano is professor of Ancient History at University of Reading, with expertise in Roman social and economic history. During her visit at UrbNet, she worked on a project that investigated Roman settlement patterns and urbanism, drawing on textual and archaeological evidence, and gave two guest lectures.



**Sam Nixon** (1–31 October 2017)

Senior research associate  
University of East Anglia

His principal research to date has focused on the Sahara and West Africa during the medieval era, and in particular on exploring the trans-Saharan caravan routes linking North and West Africa. During his time at UrbNet, Sam worked on a synthetic study of the early trans-Saharan trade and gave a guest lecture.



**Nino Praisler** (3 March–31 August 2017)

MA student (individual ERASMUS grant)  
Julius Maximilians Universität Würzburg

Nino Praisler spent time at UrbNet in connection with his MA studies and was affiliated with the *Palmyra Portrait Project* under the supervision of Rubina Raja and Signe Krag.

## Research affiliates

**Professor Jörg Rüpke**

Max-Weber-Kolleg, Universität Erfurt, Germany  
Adjunct Professor at UrbNet, Aarhus University

**Dr. Jan K. Jacobsen**

The Danish Institute in Rome, Italy  
Excavation leader of the project *Excavation of Caesar's Forum in Rome*

**Postdoc Sine G. Saxkjær**

The Danish Institute in Rome, Italy

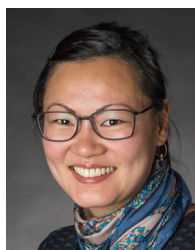
**Assistant Professor Trine A. Hass**

Aarhus University



Harouni's Tomb at Tumbé, Pemba island (Photo: Ema Bauzyte).

## Administrative employees



**Christina A. Levisen** (1 January–31 December 2017)  
Centre administrator  
School of Culture and Society, Aarhus University

Christina Levisen has worked with research administration in both Denmark and abroad and manages the day-to-day operations of the centre.



**Ivana Baf** (1 January–31 December 2017; incl. maternity leave)  
Lab technician  
Department of Physics and Astronomy, Aarhus University

Ivana Baf works on registration and chemical preparation of samples, processing of measurement results and maintenance of samples.

**Anne Birgitte B. Johannsen** (23 October–31 December 2017; maternity cover for Ivana Baf)  
Lab technician  
Department of Physics and Astronomy, Aarhus University

Anne Birgitte B. Johannsen works on registration and chemical preparation of samples, processing of measurement results and maintenance of samples.

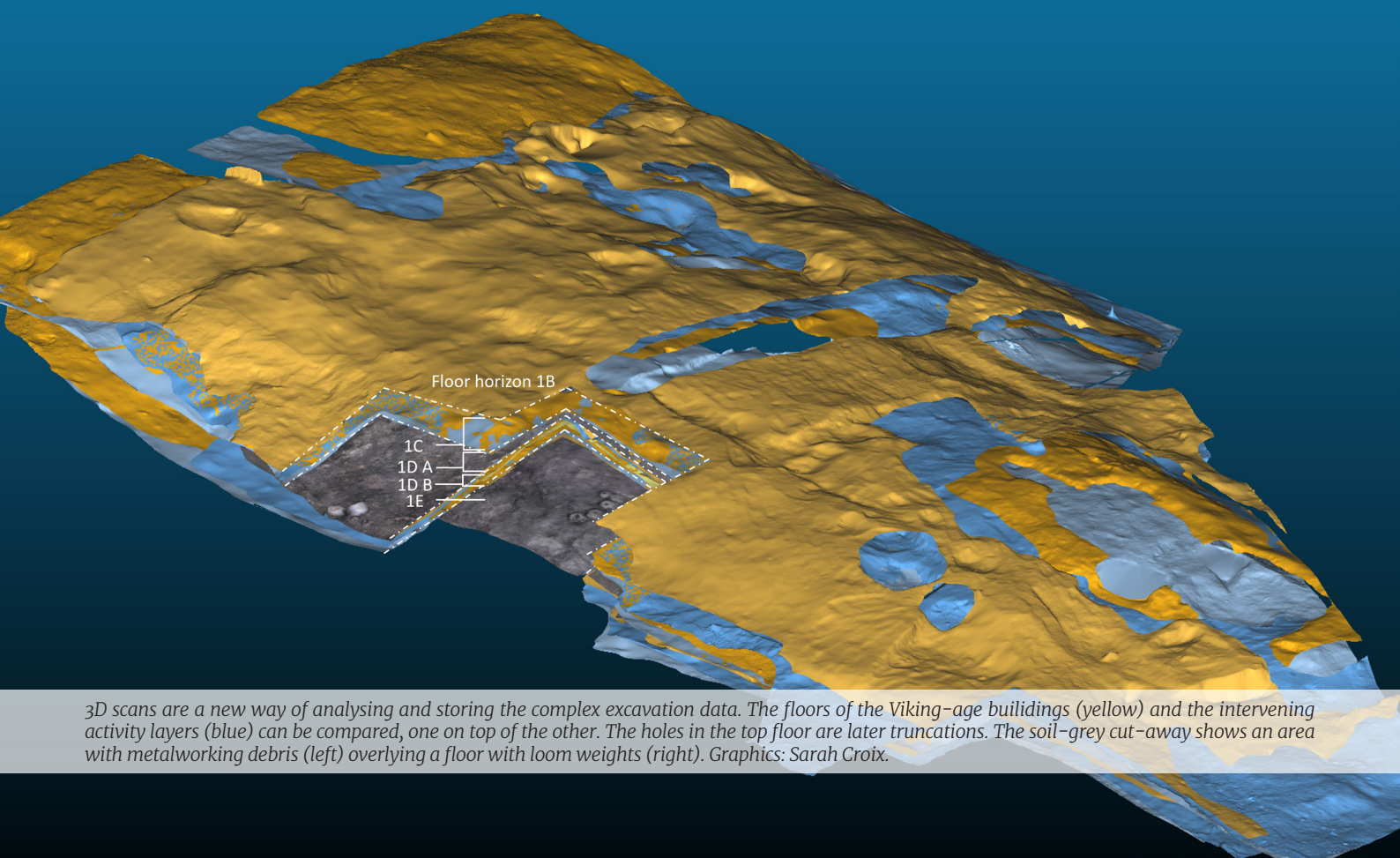
## Student assistants

Anders Dam Hove (1 January–14 February 2017)  
Ann Lisa Pedersen (1 January–31 December 2017)  
Daniel Andersen (18 April–31 December 2017)  
Ditte K. Johnson (1 January–31 December 2017)  
Erling A. N. Thorsen (25 October–31 December 2017)  
Fynn Riepe (25 October–31 December 2017)  
Jesper V. Jensen (1 January–31 December 2017)  
Julie T. Raunstrup (1 January–31 December 2017)  
Line Egelund (1 January–14 July 2017)  
Maria T. Madsen (18 April–31 December 2017)

Marian Frandsen (1 January–14 May 2017)  
Mette Lang (18 April–31 December 2017)  
Mette N. Pedersen (1 January–31 December 2016)  
Mie E. Lind (1 January–2 May 2017)  
Nathalia B. Kristensen (1 January–31 December 2017)  
Nicolai B. Thorning (18 April–31 December 2017)  
Oda N. Nordby (1 January–31 December 2017)  
Sara C. Utvaag (1 August–31 December 2017)  
Sille Møller (18 April–31 December 2017)  
Steff E. Wiklund (1 January–31 December 2017)

# UrbNet case studies 2017

Excavators Sarah Croix and Maria Knudsen uncover a group of objects left in a corner of a metal workshop: fragments of crucibles, a piece of a grindstone and a small container carved from whalebone. Patches of charcoal, small droplets of bronze and broken casting moulds show that fine copper-alloy ornaments were produced in this room (Photo: Museum of Southwest Jutland).



3D scans are a new way of analysing and storing the complex excavation data. The floors of the Viking-age buildings (yellow) and the intervening activity layers (blue) can be compared, one on top of the other. The holes in the top floor are later truncations. The soil-grey cut-away shows an area with metalworking debris (left) overlying a floor with loom weights (right). Graphics: Sarah Croix.

# Northern Emporium: The Archaeology of Network Urbanism in Viking-Age Ribe

by Professor MSO Søren M. Sindbæk

**Director:** Søren M. Sindbæk (UrbNet, Aarhus University)

**Funding:** The Carlsberg Foundation

**Project website:** <http://projects.au.dk/northernemporium/>

As one of a small group of emporia, which emerged from the 600s CE around the North Sea and the Baltic Sea, Ribe is a key archaeological source for the early urban history of northern Europe. Whereas the remains from other North Sea emporia have been widely destroyed or damaged, the archaeology of early Ribe is, in places, exceptionally well preserved.

Despite this potential, the remains have in the past been subject to excavations that were, at best, modestly sized trenches or, at worst, inadequately funded rescue operations. Currently, the *Northern Emporium* project is working to change this situation. Funded by the Carlsberg Foundation and carried out in close collaboration between UrbNet and the Museum of Southwest Jutland, the project issues from new, significantly improved data based on a comprehensive, stratigraphic excavation in the centre of early Ribe.

The *Northern Emporium* excavation covers what appears to be a typical streetscape in the middle of the so-called market area. The excavation is designed as a test case of the high-definition strategy pioneered by UrbNet and involves a number of the centre's research groups: The project integrates geoarchaeological and other scientific methods in order to establish the context of finds and observations; it takes advantage of the recent development of 3D laser scanning to save a detailed, digital record of every one of the hundreds of surfaces uncovered; it incorporates a range of scientific dating techniques and Bayesian modelling to build a refined chronology of the site history; and the find materials are scrutinised using a variety of material-science techniques.

Excavations began in June 2017 and will continue for a full year, after which follows a two-year analysis and publication project. So far, we have uncovered an almost fully exposed house plot

with a series of large, wooden buildings, which succeed each other through the 9th century. Together with a section of the adjacent market street, and part of the adjoining plot on the opposite side, this gives a richly detailed view of the earliest urban community in Scandinavia. Several thousand artefact finds – ranging from personal items, such as beads, amulets, pins or combs, to evidence of crafts and industries, such as bronze casting or iron smithing – can be situated in a comprehensive social and temporal context.

Questions concerning the impact of globalised resource networks and the dynamics and incentives that drive the growth of commercial exchange abound in the contemporary world. Ribe is a key resource, which can provide anchor points for such discussions on essential societal dynamics.



*Uncovering the clay floor of a substantial house from the early 800s. The size and structure of the building is a clear indication that, at this stage, the emporium was a densely settled area with a resident urban population. The building would have faced the plank-paved street, marked as a dark area in the front of the picture. The sides of the building have sunk towards an adjacent drainage ditch; hence, the floor is now leaning (Photo: Museum of Southwest Jutland).*



View of the Oval Piazza in Jerash towards the central main street (Photo: Rubina Raja).



Rubina Raja and Vinnie Nørskov opening the Jerash exhibition at the Museum of Ancient Art, Aarhus University (Photo: Ole Hejlskov).

# The Danish–German Jerash Northwest Quarter Project

by Professor Rubina Raja

**Directors:** Achim Lichtenberger (Westfälische Wilhelms-Universität Münster) and Rubina Raja (UrbNet, Aarhus University)

**Funding:** The Carlsberg Foundation, the Danish National Research Foundation, Deutsche Forschungsgemeinschaft (DFG), EliteForsk (Danish Ministry of Higher Education and Science) and H. P. Hjerl Hansens Mindefondet for Dansk Palæstinaforskning

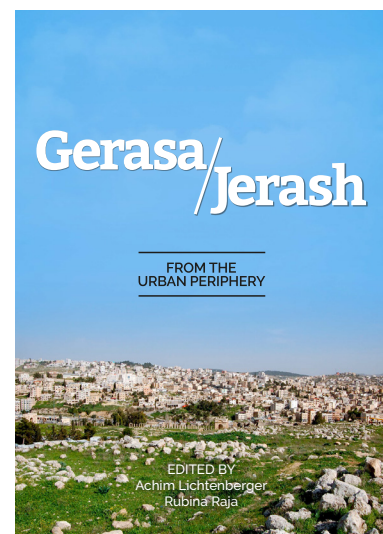
**Project website:** <http://projects.au.dk/internationaljerashexcavation/>

In 2017, the *Danish–German Jerash Northwest Quarter Project* conducted a study campaign, which exclusively included specialists affiliated with the project. The aim was to clarify a set of specific questions relating to the inner urban stratigraphies as well as specific material groups, in order to prepare for the final publications of the project, which has run since 2011. During the two-week campaign, a set of material groups was examined in detail. These included, among other things, bones, glass, stone objects, ceramics, lamps, jewellery, archaeo-botanical material and coins. The in-depth study of these groups of materials allowed for the specialists to move forward with their conclusive publications concerning the artefacts excavated during the project.

As a follow-up on all work done between 2011 and 2017, a specialists' workshop was hosted at UrbNet in October 2017. At this event, more than 20 specialists affiliated with the project participated in order to exchange knowledge about their specific groups of material. This event was organised in order to create further synergy between the various final publication chapters as well as to enhance the overall understanding of the material that has been excavated during the fieldwork seasons. As part of the publication strategy, a new double-blind peer-reviewed series has been founded in order to bring out the results of the excavation in a condensed and collected shape. This series, which will be published by Brepols Publishers, carries the name *Jerash Papers*. The directors of the project are the main editors of the series, and the series has an international editorial board.

In 2017, the members of the project also focused on publications, articles as well as books. Among one of the publication initiatives was a book for the general public called *Gerasa/Jerash: From the Urban Periphery*. The book was published in an English and a

Danish version. The book featured several of the subprojects and accompanied an exhibition, which was hosted by the Museum of Ancient Art at Aarhus University. The exhibition communicated the history and archaeology of ancient Gerasa/Jerash, with a special focus on the archaeological fieldwork undertaken by the *Danish–German Jerash Northwest Quarter Project*.



Cover of the project book, published 2017 (Photo: Danish–German Jerash Northwest Quarter Project).



Team photo from the specialist study campaign 2017 (Photo: Danish–German Jerash Northwest Quarter Project).



*The Congregational Mosque from the north with the South Decumanus in foreground (Photo: Danish–German Jerash Northwest Quarter Project).*



*Ceramics pieces from Jerash, Jordan (Photo: Rubina Raja).*



# Ceramics in Context: Modelling Approaches to Pottery Distribution in Jerash

by Professor Rubina Raja

**Director:** Rubina Raja (UrbNet, Aarhus University)

**Collaborators:** Achim Lichtenberger (Westfälische-Wilhelms-Universität Münster), Iza Romanowska (Barcelona Supercomputing Center) and Tom Brughmans (University of Oxford)

**Funding:** The Carlsberg Foundation

**Project website:** <http://projects.au.dk/ceramics-in-context/>

The Danish–German Jerash Northwest Quarter Project has performed full quantification of the excavated pottery, which has revealed a fascinating pattern: for more than six centuries, approximately 99% of the almost 1 million recorded pottery sherds across all trenches and their contexts was locally produced. Imports and regional ceramic products are rare. What caused this persistent dominance of locally produced pottery? In 2017, a collaboration between *Ceramics in Context* and scholars working with formal computational modelling was set up in order to explore possible ways of understanding such patterns through formal computer modelling.

A large number of factors could account for the dominance of local pottery at Jerash: its size, its integration in the ancient transport system, its seemingly large local pottery production and its hinterland's capacity for local foodstuff and craft production. Ancient Gerasa, present-day Jerash in Jordan, was located some distance away from main roads in the region, such as the Via Nova Traiana, but still relatively well connected within the ancient transport system in a similar way as other medium-sized settlements in the region. Similarly, its hinterland was a fertile area with relatively good access to natural resources, allowing for a degree of self-sufficiency in foodstuffs and craft products, but as a city, it has not been defined by either a great abundance or distinctive lack of any one particular resource.

One factor that sets Jerash apart from similar medium-sized urban centres, such as other Decapolis cities, is its self-sufficiency in terms of craft production, in particular with respect to the local pottery repertoire. The virtually exclusively locally produced pottery at the site is not a sign of residents' lack of wealth as they clearly had enough disposable income to fund e.g. large-scale

monumental architecture. Neither is it a sign of disconnection from the major transport routes, as attested by various raw materials imported from all corners of the Empire. The exceptional nature of this phenomenon becomes clear in light of comparisons with other urban centres in the region with comparable geographical settings and economic situations but with significantly more diverse ceramic assemblages consisting of a combination of local products with regional and overseas imports.

A number of theories are being modelled in order to better explain the phenomenon of self-sufficiency in craft production in Jerash: its geographical setting, economic situation, the dynamics of craft production and the preference for locally produced craft products. Arguments involve the discussed geographical, economic and craft production factors serving to explain the reliance on local craft products to a certain extent but not to such extremes as is robustly evidenced in Jerash. Our expectation would be for the ceramics in Jerash to show patterns more in line with comparable towns in the region – a combination of locally produced ceramics with regional products and a minority of products imported from far away. This expected data pattern is not evidenced in the case of Jerash, due to another socio-economic factor, namely preference for local produce, which is much more difficult to identify than factors such as the natural resources of its hinterland, its integration in the ancient transport system or even the changing scale of its craft production. Within the ongoing work in *Ceramics in Context*, a series of publications in 2018 will discuss scenarios for how individuals' preferences might have led to the population-wide pattern observed in the archaeological data.



Photogrammetric composite image showing the trough in the 'House of the Tesserae' from the east (Photo: Danish-German Jerash Northwest Quarter Project).



Close-up photograph of some of the tesserae recovered from the trough in trench P (Photo: Danish-German Jerash Northwest Quarter Project).



# Studying Mosaics in a Diachronic Perspective

by Professor Rubina Raja

**Directors:** Achim Lichtenberger (Westfälische Wilhelms-Universität Münster) and Rubina Raja (UrbNet, Aarhus University)

**Funding:** The Carlsberg Foundation, the Danish National Research Foundation, Deutsche Forschungsgemeinschaft (DFG), EliteForsk (Danish Ministry of Higher Education and Science) and H. P. Hjerl Hansens Mindefondet for Dansk Palæstinaforskning

**Project website:** <http://projects.au.dk/internationaljerashexcavation/>

During the fieldwork undertaken by the *Danish-German Jerash Northwest Quarter Project*, it has become clear that the Northwest Quarter held dense Late Roman, Byzantine and Umayyad settlement layers. The settlement in this part of the city, however, came to an abrupt end with the mid-8th century CE earthquake. Especially on the Eastern Terrace of the Northwest Quarter, which overlooks the monumental Roman Temple of Artemis, the earthquake of 749 CE sealed domestic complexes dating to the Umayyad period. This area, covering approximately 3000 m<sup>2</sup>, presents us with frozen moments in time.

During the 2015 and 2016 campaigns, a set of structures belonging to domestic complexes were excavated. These complexes belonged to private houses of the Umayyad period, which were destroyed in the devastating earthquake of 749 CE. The houses were spacious and multi-storeyed, with simple rooms on the ground floors, such as kitchens and storage rooms, but also with some rooms carrying wall-painting and stucco decoration. The more elaborate rooms were, however, situated on the upper floors. One of the partly excavated houses was undergoing extensive renovation at the time when the earthquake hit Jerash. This house yielded important evidence for the production technology of the period, in particular connected to mosaic production. The house, which was two-storeyed not only revealed that mosaics with geometric patterns had been laid on the first floor of the building but also contained evidence for the production process of mosaics in this period.

One of the central ground-floor rooms contained a large oblong trough containing thousands of pristine, unused, white mosaic tesserae. The unique find and its context offered a unique glimpse into the practical organisation of mosaicists in the Early Islamic

period and added significantly to our knowledge about ancient technology in general, showing that mosaic production took place on site, and that the mosaic stones – the so-called tesserae – also might have been produced on location. The study was published in 2017 in the high-impact journal *Antiquity* and received an immense amount of international attention.



Photograph of the northern section of the tesserae trough in trench P (Photo: Danish-German Jerash Northwest Quarter Project).



Selection of turquoise, glazed sherds, from Persian Gulf (Photo: Urban Transitions Project).



Sampling grid across house floor, UZoo2 (Photo: Urban Transitions Project).

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# Urban Transitions in the Zanzibar Archipelago: Examining Houses at Unguja Ukuu

by Assistant Professor Federica Sulas and Lecturer Stephanie Wynne-Jones

**Directors:** Federica Sulas (UrbNet, Aarhus University) and Stephanie Wynne-Jones (University of York)

**Funding:** UrbNet

**Project website:** <http://projects.au.dk/urban-transitions-in-zanzibar/>

The development of urban centres on the eastern African coast occurred from the 7th century CE onwards. The island of Zanzibar was home to the earliest settlements that possessed urban characteristics; at Unguja Ukuu, there is evidence for an emporium dating from the start of this period, with extensive craftworking and long-distance trade connections. Archaeology at the site has recorded dense and varied occupation deposits that represent a unique urban tradition in this region. Zanzibar's early inhabitants were exploiting both regional and intercontinental trade networks, bringing them exotic goods such as glass beads from Asia and glazed pottery from the Persian Gulf. Yet, until now, there has been virtually no information on how these people lived, their houses or daily activities. Excavating domestic architecture in early medieval Africa is challenging as houses were often made of perishable materials such as clay and wood, which do not survive well in tropical climates.

In 2017, UrbNet continued its exploration of urbanism on Zanzibar with excavations at Unguja Ukuu, directed by UrbNet Assistant Professor Federica Sulas and Urbnet core group member Stephanie Wynne-Jones. The first field excavation season (July) focused on excavating a sequence of house deposits and characterising the broad landscape conditions of urban development. The excavations provided the first-ever excavated house and retrieved a wide range of artefacts and materials such as pottery, glass and metal objects, shells and plant remains.

In line with UrbNet's mission to develop high-definition archaeologies of urban contexts, work at Unguja Ukuu employed contextual excavations and a systematic sampling strategy. In addition to recording and collecting all artefacts encountered, floors and occupation surfaces were sampled at a high

resolution for laboratory analyses aimed at extracting evidence of past conditions and activities that may be preserved only at microscopic and nano-scale. Mapping of chemical concentrations preserved in the floor sediments, for example, has enabled us to define the layout of the house: a roughly square structure built with daub (clay) with annexed patio-like spaces. Further analysis integrating soil chemistry, artefact distribution and study of plant microfossils is now revealing the spatial organisation of domestic activity and the possible processes being undertaken in the house. Of particular interest are the ways that environmental resources such as wood, coral, shell and plants were used, as this will give us vital clues as to how the town was based on a particular environment, and how it affected that environment over time. This may reveal insights into why this site was chosen and why Unguja Ukuu flourished as the earliest emporium in eastern Africa.

In 2018, laboratory analyses will continue with a focus on defining the chronology of occupation, resource uses, how the settlement changed over time and its impact on the local landscape.



*Bead grinders for making shell beads, created from local ceramic sherds (Photo: Urban Transitions Project).*



Detail of Forum of Caesar in Rome (Photo: Danish Embassy in Rome).

# The Forum of Caesar: Uncovering 3000 Years of Urban Development in the Centre of Ancient Rome

by Dr. Jan K. Jacobsen and Professor Rubina Raja

**Directors:** Jan K. Jacobsen (The Danish Institute in Rome / UrbNet, Aarhus University) and Rubina Raja (UrbNet, Aarhus University)

**Funding:** The Carlsberg Foundation

**Project website:** Under development

In 2017, a major grant was received from the Carlsberg Foundation (11 million DKK) for extensive new excavations of the, until now, covered parts of Caesar's Forum in central Rome, Italy. Through this project, UrbNet and the Danish Institute in Rome will be joining forces with the Sovrintendenza Capitolina ai Beni Culturali to conduct large-scale excavations in the so far unexplored northeastern part of the Forum of Caesar. The project, which will run until 2022, is based on an extensive interdisciplinary collaboration between Danish and Italian scholars. Inaugurated by Gaius Julius Caesar in 46 BCE, the forum is regarded as one of the most important archaeological locations in Rome, not only due to the grandeur of this monumental square with its temple dedicated to Venus Genetrix, but also due to the unique earlier remains known to be located below the Roman-period levels. These levels reach back centuries before the mythical foundation of Rome in 753 BCE, as shown by earlier excavations close by.

The overall aim of the new research excavation is to shed new light on the urban development of central Rome from c. 1300 BCE until modern times, through the application of high-definition methods to structural and non-structural remains in the excavation area, which covers about 2000 m<sup>2</sup>. The combination of contextual-based excavations and high-definition methods from the natural sciences (e.g. geochemical element analysis, DNA analysis and micromorphology) will be embedded in the research strategy from the beginning of the project and will be applied on this complex archaeological stratigraphy, which covers several millennia. To achieve this aim, UrbNet is collaborating with several Danish and foreign research institutions. Postdoc and PhD projects are based at UrbNet, where the research strategy emerged from. The various sub-projects will conduct pinpointed investigations into diverse topics such as prehistoric

burials underneath the Forum of Caesar, pre-Roman urbanisation processes as well as the gradual transformation of the area and the architectural transformations of the Forum of Caesar itself from Late Republican to medieval times. In this way, the new excavations will slice right through the complete history of the eternal city and bring new perspectives on urban settings and their developments over a period of more than 3000 years.



Forum of Caesar (Photo: The Carlsberg Foundation).



The project was launched 26 October 2017, with the presence of Her Majesty Queen Margrethe II of Denmark (Photo: Sine Grove Saxkjær).



Cleaning of a relief fragment excavated in Doliche (Photo: Peter Jülich).



Late antique church with mosaic floors excavated in Doliche (Photo: Michael Blömer).



# Excavating Doliche: The Campaign 2017

by Assistant Professor Michael Blömer

**Directors:** Michael Blömer (UrbNet, Aarhus University) and Engelbert Winter (Westfälische Wilhelms-Universität Münster)

**Funding:** Deutsche Forschungsgemeinschaft (DFG)

**Project website:** <http://www.doliche.de/>

In summer 2017, an international team of 36 students and specialists from various disciplines worked for two months in Doliche, an ancient city in South East Turkey, close to the Syrian border. This groundbreaking project aims to better understand ancient and early medieval urbanism in Syria. It is funded by the German Research Council and closely affiliated with UrbNet. By integrating contextual archaeology and scientific techniques, the project will not only test and challenge the urban history of Doliche but will also deliver new assumptions about urbanism in the Near East.

The campaign 2017 had three main objectives. First, an intensive survey of the site explored the extent and the spatial organisation of the city. The second focus was on the development of the city in Late Antiquity (4th–7th century CE). Excavations in the southwestern part of the city revealed that a building, which was partly uncovered already in 2015, is in fact a large church of the late 4th century. High-quality mosaics cover the floor of the main aisle and the side naves. The contextual analysis of the finds will be important for the dating of the church and the understanding of religious practices in

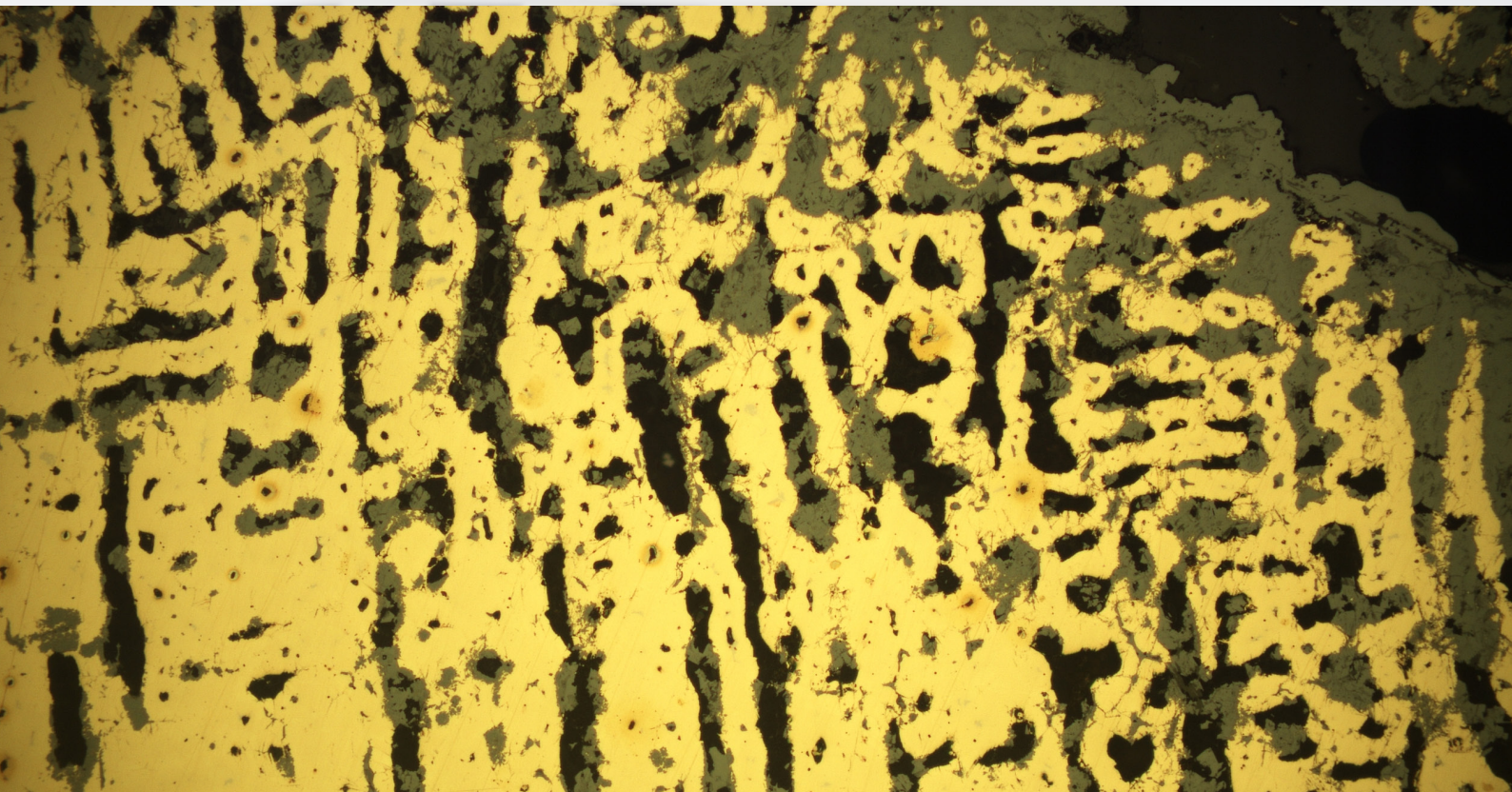
the Christian city. Moreover, it will provide the rare opportunity to refine the chronology of locally produced pottery of Early Byzantine/Early Islamic North Syria.

The third focus was on the investigation of a large area in the eastern part of the city, which was identified as the administrative and public centre of Doliche. In test trenches, we uncovered sections of a large building complex that must be interpreted as a bath building of the Roman Imperial period. Since only a few Roman bath complexes have been excavated in Syria so far, this discovery is of great importance and will improve our understanding of urban life in the region.

Adjacent to the massive bath complex, we came across foundations of a large Roman building, which appear to be part of a public building. More than one thousand seal impressions were retrieved from fill layers and indicate that the city archive of Doliche is nearby. The study of the seal impressions will provide the unique opportunity to study problems of city administration and the city's entanglement in regional networks.



*A fused lump of metal artefacts from the special hoard find from Jerash (Photo: Vana Orfanou).*



*A micrograph showing the dendritic microstructure of a copper-alloy ingot from Ribe, indicative of casting (Photo: Vana Orfanou).*

# Archaeometallurgy at UrbNet: Diachronic Studies of Commercial Networks and Technology in Urban Contexts

by Assistant Professor Thomas Birch and Postdoc Vana Orfanou

**Directors:** Achim Lichtenberger (Westfälische Wilhelms-Universität Münster), Rubina Raja (UrbNet, Aarhus University) and Søren M. Sindbæk (UrbNet, Aarhus University)

**Partners:** Museum of Southwest Jutland, Aarhus Geochemistry and Isotope Research (AGIR) Platform (Aarhus University)

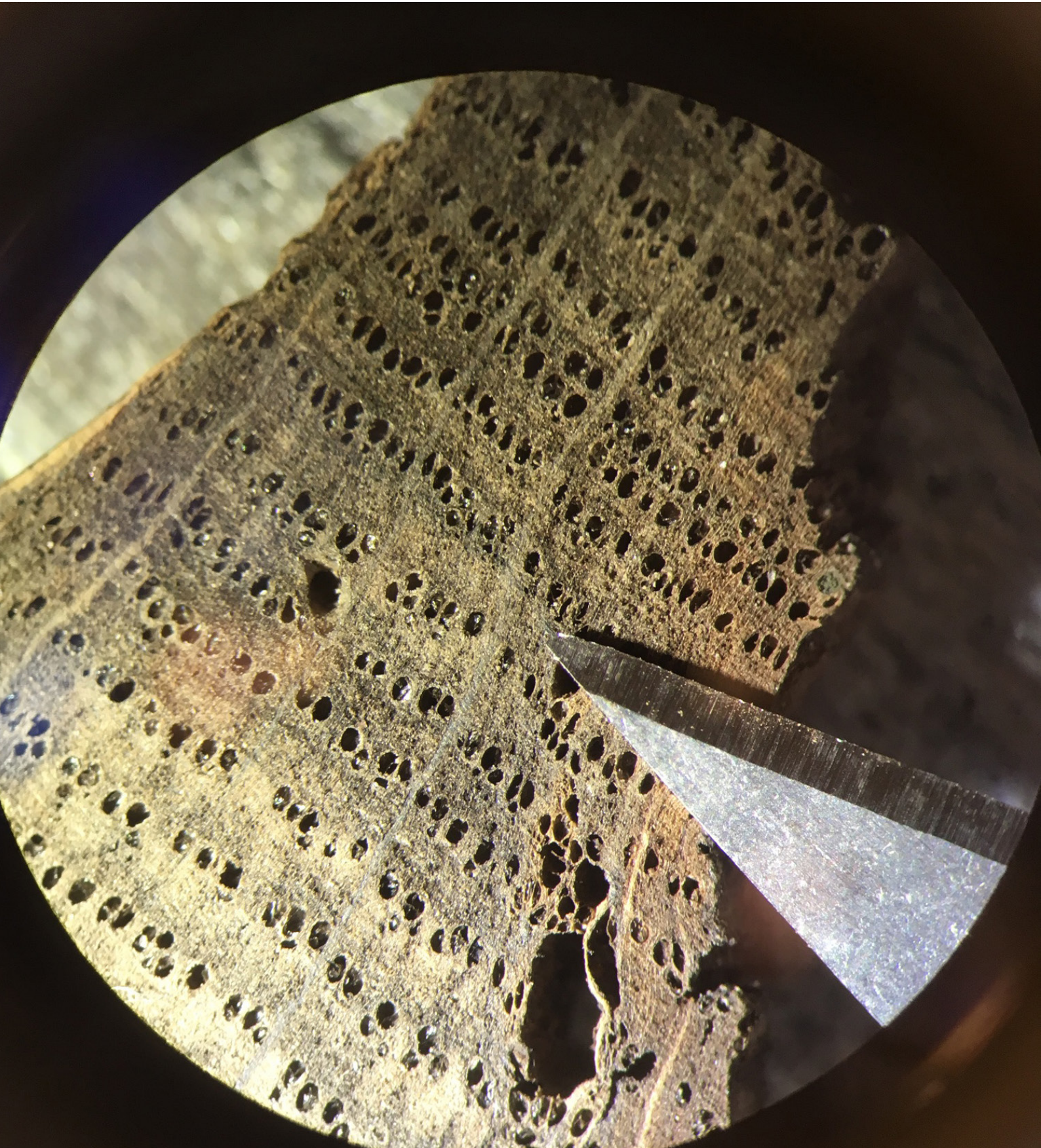
**Funding:** UrbNet, The Carlsberg Foundation, Danish National Research Foundation, Deutsche Forschungsgemeinschaft (DFG), EliteForsk (Danish Ministry of Higher Education and Science) and H. P. Hjerl Hansens Mindefondet for Dansk Palæstinaforskning

**Websites:** <http://projects.au.dk/internationaljerashexcavation/> and <http://projects.au.dk/northernemporium/>

The general aim of Archaeometallurgy at UrbNet is to highlight the catalysing nature of metals and their intimate, sometimes causal, relationship with urban processes. To investigate this, the work so far has focused predominantly on metallurgical finds from the cities of ancient Gerasa (Jerash), Jordan, and Ribe, Denmark – the earliest urban site in Scandinavia.

Three of the main sub projects from Jerash are now at publication stage. The first study analysed 75 coins from the city, characterising the development in copper(-alloys) used for minting coinage for everyday transactions. The results have revealed oscillations in compositions between unalloyed and leaded copper. During some periods, it is possible that copper coinage was being debased with lead, potentially indicative of economic instability where more coins were needed, or where metal-supply networks had broken down. Spanning the same time periods, some fifty copper-alloy objects, including a small hoard recovered from what would have originally been a casket, have also been studied. These objects represent a number of functions from personal adornment and dress ornamentation, to keys and utensils. Compositional analyses have so far revealed distinct technological changes from the Roman to the Islamic periods, as well as providing a unique insight into processes of metal reuse, mixing and recycling at Jerash over the course of its use. Work is now embarking on lead-isotope analysis (LIA) of lead objects (including an ingot) and other artefacts to provenance their geological source.

Archaeometallurgical studies at Ribe investigate the role of non-ferrous metallurgy in the urbanisation processes during the 8th and 9th centuries CE. Several stages of the archaeometallurgical cycle that took place on site are addressed, including metal secondary processing (crucibles), trading and branding (bar ingots), object manufacturing (moulds) and the finished products (artefacts). A comprehensive and strategic methodological campaign was implemented in order to manage this assemblage, which amounts to thousands of metallurgical ceramics fragments as well as large amounts of objects. Surface analyses of some 800 crucible and mould fragments have been conducted for acquiring maximum information and for targeting invasive sampling. Some 55 crucible fragments have been selected for further quantitative analyses, which will reveal more on the nature of metalworking via the analyses of metal prills trapped in the crucible walls. These results will be compared to the compositions of bar ingots and finished objects. LIA has also been initiated for the metal bars and ingots from Ribe, to establish the metal resources at play in the Northern Emporium maritime network. The results are helping piece together the technological cycle of non-ferrous metal production and use at Ribe, highlighting the important role of raw materials, such as copper(-alloys) and lead.



Close-up of a tree-ring sequence. The open cellular structures are early wood, and the dense wood in-between is the late wood. An annual ring is made up of an early-wood and late-wood couple. A scalpel used for cutting is shown for scale (Photo: Sabrina G. K. Kudsk).

# High-Precision Radiocarbon Measurements

by Associate Professor and AARAMS Director Jesper Olsen

**Director:** Jesper Olsen (Aarhus University)

**Funding:** Department of Physics and Astronomy, Aarhus University; UrbNet

**Website:** <http://phys.au.dk/forskning/forskningsomraader/aarhus-ams-centre/>

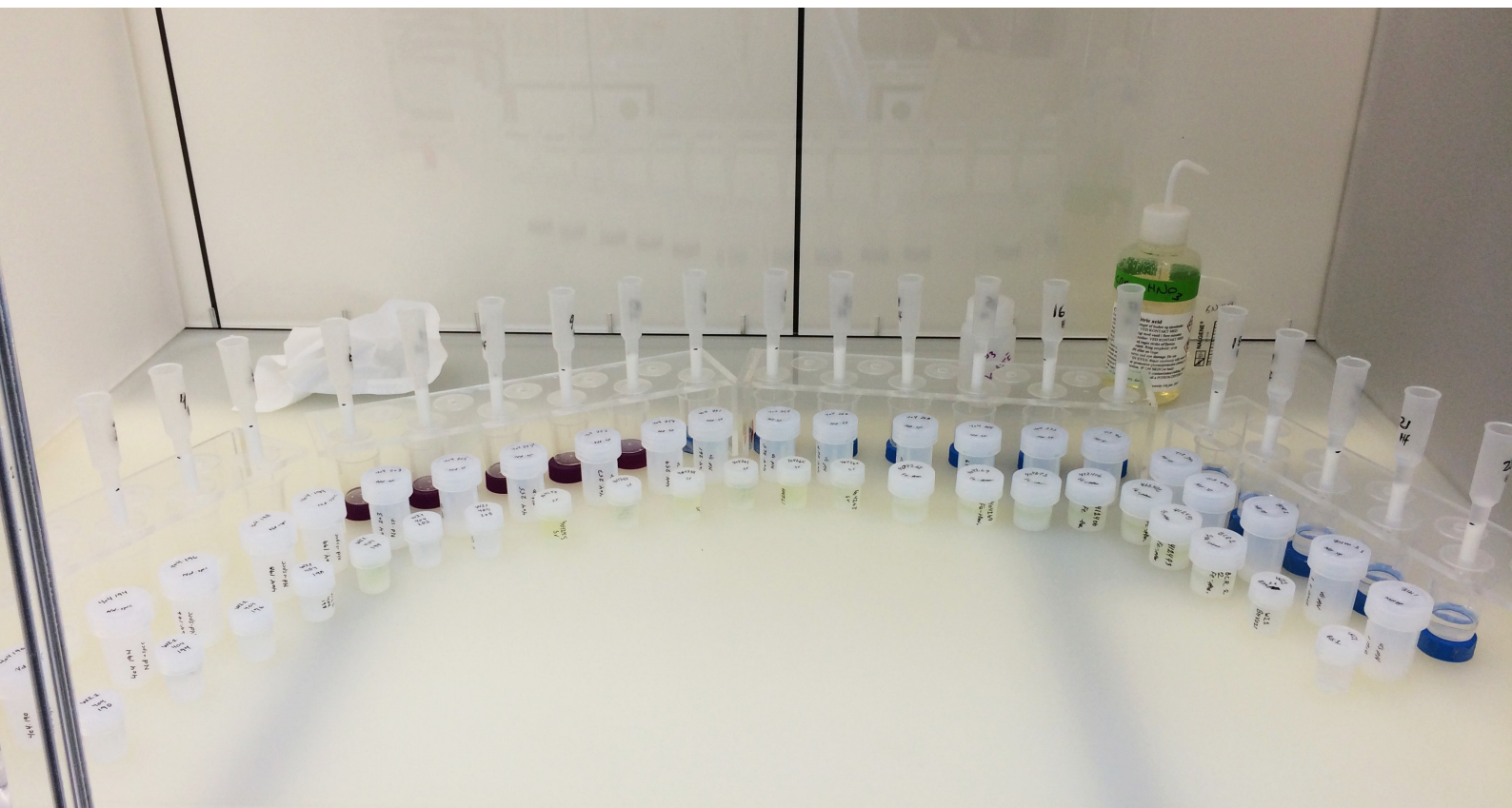
In 2017, a project on annual high-precision radiocarbon measurements on tree rings was initiated between Aarhus AMS  $^{14}\text{C}$  Dating Centre (AARAMS), the dendrochronological laboratory at the National Museum and UrbNet. The overall aim of the project is to produce a new radiocarbon calibration dataset for two periods of key interest to the UrbNet agenda. In addition, the project aims at producing high-definition chronologies by combining radiocarbon ages with stratigraphical information to construct Bayesian statistical models. The project employs Postdoc Bente Philippsen and research assistant Mikkel F. Schou.

When a sample is submitted for radiocarbon dating, the result is provided as an age in  $^{14}\text{C}$  years. This radiocarbon age is subsequently converted to a calendar age by using the international radiocarbon calibration curve (at present IntCal13). However, research conducted by other groups as well as at AARAMS have shown that, during specific periods, it appears as if new measurements are offset in  $^{14}\text{C}$  age relative to the calibration curve. Consequently, calibrated ages may potentially be inaccurate, which, of course, may have profound implications for radiocarbon-based archaeological chronologies. This is particularly true for the Roman period (c. 200 BCE–600 CE) and historical periods such the Viking period or the medieval period where even small inaccuracies of about 25–50 years are of paramount importance. Therefore, the new radiocarbon calibration datasets, which are being constructed, will aid the chronological interpretation of UrbNet's focus locations in e.g. Jerash and Ribe.

The first radiocarbon calibration curve was produced by Ferguson in 1960, and since the emergence of the IntCal98 calibration curve, this work has been undertaken by an international working

group, with updates approximately every sixth year. Most of the datasets are based on measurements of ten-year tree-ring blocks, and only recently, work on achieving annual resolution have been made, probably because this work is very time consuming and requires thousands of  $^{14}\text{C}$  measurements. Thus, the datasets produced in this project will be submitted to the IntCal working group for inclusion in forthcoming updates of the international calibration curve.

To produce a tree-ring calibration dataset, a slab of tree firstly needs to be cut into sub-annual samples. We use the tree from Danish oak chronology provided by the National Museum of Denmark. Oak trees produce what is known as early and late wood. Early wood is laid down in early spring and may contain small amounts of carbon from the previous year, whereas late wood is produced in the summer months, and most importantly, it only contains carbon from the year of production. After cutting, the cellulose is extracted from the late-wood samples in the laboratory and measured with the 1MV Tandetron accelerator at the Department of Physics and Astronomy, Aarhus University. So far, the project has produced 44 tree-ring  $^{14}\text{C}$  measurements. Interestingly, this small dataset illustrates quite well why there is a strong need for updating the calibration curve to annual resolution. The  $^{14}\text{C}$  samples around 875 CE appear to agree very well with the existing calibration curve, whereas there appears to be a significant offset between the calibration curve and the new  $^{14}\text{C}$  data around 725 CE.



View into one of the laminar flow work stations in the AGIR ultra-clean laboratory showing racks of Teflon columns filled with ion-exchange resin for separation of trace metals, e.g. strontium for isotopic analysis by mass spectrometry. Teflon beakers in the foreground are used to dissolve samples in acid that is loaded and eluted on the columns (Photo: Charles Lesher).



Double exposure of 193 nm (wavelength) Nd: YAG laser connected to mass spectrometer for in-situ trace-metal and isotopic analysis of artefacts (foreground) and metal-free, ultra-clean laboratory for chemical purifications of digested samples for isotopic analysis (background) (Photo: Charles Lesher).

# AGiR Platform Update

by Professor and AGiR Director Charles Leshner and Assistant Professor Gry H. Barfod

**Director:** Charles E. Leshner (Niels Bohr Professor, Aarhus University)

**Funding:** The Danish National Research Foundation; UrbNet

**Website:** <http://geo.au.dk/agir/>

2017 was a very busy year for UrbNet-related research utilising the new Aarhus Geochemistry and Isotope Research (AGiR) platform – an outgrowth of DNRF funding for the Niels Bohr Professorship in Geoscience during the past five years. Niels Bohr Professor Charles E. Leshner and Assistant Professor Gry H. Barfod, serving as members of the UrbNet core group, are principally based at AGiR where they oversee operations, training and guide UrbNet activities involving students, postdocs and assistant professors. The AGiR platform provides state-of-the-art mass spectrometry facilities for determining the abundance of trace metals and their isotopes in artefacts from all of the major sites being investigated by UrbNet researchers. AGiR also provides access to and expertise in optical, electron and X-ray microscopy, including the field-deployable XRF unit – all essential analytical tools in UrbNet research on glass, bricks, ceramics, pigments, jewellery, metal slags and other metal objects.

AGiR also maintains and operates many of the facilities required for the preparation of archaeological materials for chemical and isotopic analysis. We have now set up chemical separation and analytical procedures for Pb isotopes being used in provenance studies and investigations of manufacturing methods and recycling of lead weights for Jerash and coins, as well as personal ornaments, hack-silver and ingots from Ribe, specifically, and Scandinavia, generally. We also are attempting to develop micro-sampling techniques, using our 193 nm (wavelength) Nd: YAG laser connected to a multiple collection inductively coupled mass spectrometer (ICPMS) to determine in situ the Sr isotopic composition of archaeological glasses, and Pb isotopic composition of coinage, jewellery and other finds that are far too valuable to be subjected to more conventional isotopic analysis.

In 2017, AGiR enabled two bachelor students and one MS student to perform their analytical work on materials recovered from Ribe and Zanzibar excavations, and currently, three UrbNet PhD students are performing their analytical work at AGiR. UrbNet postdoc Vana Orfanou based in the Department of Geoscience continued her work on metallurgy and provenance studies in Jerash and Ribe, using a combination of petrographic, chemical and isotope techniques. Assistant Professors Thomas Birch and Federica Sulas have begun to utilise AGiR unique capabilities for their research on metals and glass, respectively. AGiR continues to contribute the educational mission of UrbNet, sharing its expertise in geochemical methods through lectures, participation in the UrbNet PhD course ‘Isotopes in Archaeology’ and Viking school, led by UrbNet Assistant Professor Thomas Birch, and much one-on-one training.

Charles Leshner and Gry Barfod visited Jerash in August of 2017 to learn first hand about the site and to explore future projects relating natural resources and commerce connecting the city to the hinterland.



View of the Roman temple ruins at Gadara (Umm Qays) in northern Jordan, constructed with local white limestone and locally derived black lava (basalt). Photo from field visit in 2017 (Photo: Charles Leshner).



Extraction of data from bone material for  $^{14}\text{C}$  dating (Photo: Søren M. Sindbæk).



Extraction of data from bone material for  $^{14}\text{C}$  dating (Photo: Søren M. Sindbæk).



# Aarhus AMS $^{14}\text{C}$ Dating Centre (AARAMS)

by Associate Professor and AARAMS Director Jesper Olsen

**Director:** Jesper Olsen (Aarhus University)

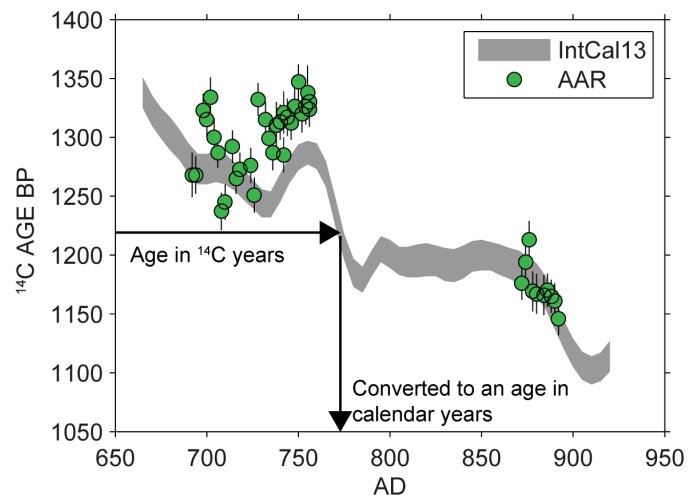
**Funding:** Department of Physics and Astronomy, Aarhus University

**Website:** <http://phys.au.dk/forskning/forskningsomraader/aarhus-ams-centre/>

The collaboration between UrbNet and Aarhus AMS Centre (AARAMS) is largely driven by scientific questions of common interest and, in some cases, method developments. Radiocarbon is a well-established technique providing chronological information on a variety of different sample materials. However, calibrating radiocarbon ages often result in wide age ranges, providing less valuable age determinations for archaeologists. To constrain these age ranges, statistical models are employed by including relative age information. A prerequisite for constructing accurate models is knowledge exchange between AARAMS and the UrbNet archaeologist involved. Hence, to construct high-definition chronologies for Jerash, Copenhagen, Odense, Ribe or East Africa in order to correctly interpret the radiocarbon data, knowledge exchange is key; for the Ribe project, this knowledge exchange and model construction occur while the site is excavated in order to find the best sample for radiocarbon.

By working together on these projects, it has become clear that improved or new laboratory techniques are necessary. For example, attempts to radiocarbon date mortars from Jerash has revealed the need for improving the mortar-dating protocol. To accommodate this development, a PhD project has been proposed and is expected to start in late spring 2018. Under warm and dry conditions, bone collagen is poorly preserved, resulting in too low a collagen yield for two human bones from Jerash. Thus, a postdoc at AARAMS has initiated experiments with new collagen extraction methods, aiming to produce radiocarbon ages for these important samples. A third example of a project developed out of mutual research interests is a tree-ring project aiming at producing new high-resolution (annual) data for the international radiocarbon calibration curve. Research conducted over the past c. five years has proven the radiocarbon calibration to be inaccurate during

specific periods; this has large implications for high-definition chronologies, and with UrbNet involvement, we can secure data to provide accurate calibration during periods of interest for the UrbNet agenda.



The international radiocarbon calibration curve together with new annual data measured within this project. Samples are measured on the  $^{14}\text{C}$  age scale and converted into calendar years, using the calibration curve (Source: Reimer, P. J., Bard, E., Bayliss, A., Beck, J. W., Blackwell, P. G., Bronk Ramsey, C., Buck, C. E., Cheng, H., Edwards, R. L., Friedrich, M., Grootes, P. M., Guilderson, T. P., Hafliðason, H., Hajdas, I., Hatté, C., Heaton, T. J., Hoffmann, D. L., Hogg, A. G., Hughen, K. A., Kaiser, K. F., Kromer, B., Manning, S. W., Niu, M., Reimer, R. W., Richards, D. A., Scott, E. M., Southon, J. R., Staff, R. A., Turney, C. S. M. and van der Plicht, J. (2013). *IntCal13 and Marine13 Radiocarbon Age Calibration Curves 0–50,000 Years cal BP*. *Radiocarbon* 55, 1869–1887).



*View of trench S, a cistern filled intentionally in the late 3rd century CE (Photo: Danish-German Jerash Northwest Quarter Project).*

## Awards



Michael Blömer at Moesgaard (Photo: UrbNet).

In 2017, Assistant Professor Michael Blömer was elected Corresponding Member of *Deutsches Archäologisches Institut* (DAI). Memberships are awarded by the *Zentraldirektion* and the commissions and are given in recognition of scholars' standing as internationally acclaimed specialists in the field of archaeology and related disciplines as well as for their contribution to the field.

## Internationalisation

In 2017, UrbNet agreed to partner in a newly launched project, *Ancient Cities: Creating a Digital Learning Environment on Cultural Heritage* (AnCit), funded by an ERASMUS+ grant. The aim of the project is to build a digital teaching/learning platform around the topic of the ancient city.

By uniting some of the world's leading experts in cultural heritage and liaising closely with specialists in online teaching/learning, the project will set up a joint Massive Open Online Course (MOOC), aiming at a broad international audience, as well as an e-learning course on ancient urbanism, which can be implemented in the Classical Archaeology programmes at the respective partner institutions.

AU is represented in this project by UrbNet in collaboration with Centre for Teaching Development and Digital Media (CUDiM)

and the School of Culture and Society, Department of History and Classical Studies. The corresponding partners at UrbNet/AU are Assistant Professor Michael Blömer (local coordinator) and Professor Rubina Raja.

UrbNet, in collaboration with Classical Studies at the School of Culture and Society, Aarhus University, also entered an ERASMUS agreement with Birkbeck College, University of London. The agreement facilitates an exchange of two MA students per semester, and the first incoming students are planned for 2018.



Co-funded by the  
Erasmus+ Programme  
of the European Union

## Events

### Conferences and workshops

- 18–20 January 2017      Conference: *Network Evolutions*, Aarhus University, Aarhus, Denmark
- 6 February 2017      Conference: *Representations of Women and Children in Roman-Period Palmyra: Part II*, Aarhus University, Aarhus, Denmark
- 1 March 2017      Workshop: *Regional Networks. Technological Transfers? Production and Consumption Patterns in Roman Pottery of the Decapolis*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark
- 2–3 March 2017      Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark
- 7 March–3 May 2017      Lecture series: *Palmyra Portrait Project*, Aarhus University, Aarhus, Denmark
- 21 March–7 November 2017      Lecture series: *Urban Network Evolutions*, Aarhus University, Aarhus, Denmark
- 18 April–30 June 2017      Lecture series: *Forsvundne Byer*, The Danish University Extension, Emdrup, Denmark
- 27 April 2017      Workshop: *BIOBINOCULARS on Urban Archaeology*, Aarhus University, Aarhus, Denmark
- 23 May 2017      PhD meeting: *How to Get Our Research Out There?* Aarhus University, Aarhus, Denmark
- 15–16 June 2017      Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark
- 15–17 June 2017      Conference: *Sa Massaria: Risultati del Progetto*, Cagliari–Las–Plassas–Torpè, Las Plassas, Italy
- 22 June 2017      Workshop: *Excavation at Caesar's Forum in Rome*, Aarhus University, Aarhus, Denmark
- 5–12 August 2017      Conference: *18th Viking Congress*, National Museum, Copenhagen, Denmark / Ribe Katedralskole, Ribe, Denmark
- 30 August–2 September 2017      Annual meeting: *Building Bridges* (Session: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*), European Association of Archaeologists, Maastricht, The Netherlands
- 21–22 September 2017      Conference: *Revisiting the Religious Life of Palmyra*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark
- 1 October–20 December 2017      Lecture series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark



Recording contexts using 3D laser scanning at the Northern Emporium excavation in Ribe (Photo: Museum of Southwest Jutland).

- 2 October–20 November 2017      Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE–8th century CE*, Aarhus University, Aarhus, Denmark
- 5 October 2017                      Conference: *Production Economy in the Region of Wider Syria, part I: Craftsmen and Production Techniques*, Aarhus University, Aarhus, Denmark
- 11 October 2017                     Workshop: *Specialist Workshop for the Danish–German Jerash Northwest Quarter Project*, Aarhus University, Aarhus, Denmark
- 12 October 2017                     Conference: *Cilician Wine, African Plates, Italian Cooking – Imported Pottery in the Decapolis in Roman to Early Islamic Times*, Aarhus University, Aarhus, Denmark
- 24 October 2017                     Workshop: *Comparing the numismatic material across modern borders*, Aarhus University, Aarhus, Denmark
- 8–10 November 2017                Conference: *Urban Religion in Late Antiquity*, Augustinerkloster, Erfurt, Germany
- 15–17 November 2017               Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark



The complex stratigraphy of a Viking emporium calls for high-definition methods. Here, block-samples are carved from the section of a modern pit. The blocks will be worked into thin-section slides, which can reveal the detailed history (or micromorphology) of the floor layer. The yellow layers in the section are a series of clay floors from wooden buildings from the 9th century CE (Photo: Museum of Southwest Jutland).



Recording sections of the finely laminated floor contexts at the Northern Emporium excavation in Ribe (Photo: Museum of Southwest Jutland).

## Lectures and seminars

- 17 January 2017  
 Angkor: Grandeur and demise  
*UrbNet lecture series*  
 Roland Fletcher (University of Sydney)
- 7 February 2017  
 Hostile Friends: Zenobia and the Roman Imperial Court  
*Palmyra Portrait Project lecture series*  
 Nathaneal J. Andrade (Binghamton University)
- 7 February 2017  
 The impact of global connections and the formation of the Roman Empire (200–30 BC)  
*UrbNet lecture series*  
 Miguel J. Versluys (University of Leiden)
- 7 March 2017  
 The triumph of the pagan statue: The ancient city in medieval Constantinople  
*UrbNet lecture series*  
 Paroma Chatterjee (University of Michigan)
- 7 March 2017  
 Children in Palmyrene funerary epigraphy  
*Palmyra Portrait Project lecture series*  
 Sara Ringsborg (Aarhus University)
- 4 April 2017  
 Depicting the dead in North Syria: Funerary representations in Roman Commagene and Cyprethia  
*Palmyra Portrait Project lecture series*  
 Michael Blömer (Aarhus University)
- 26 April 2017  
 When is a bead not a bead? New scientific approaches to glass in North and West Africa  
*UrbNet lecture series*  
 Chloe Duckworth (Newcastle University)
- 3 May 2017  
 The Long “Roman” glass industry: Scientific evidence  
*UrbNet lecture series*  
 Ian Freeston (University College London)



Photogrammetric image of trench V in Jerash (Photo: Danish-German Jerash Northwest Quarter Project).

- 3 May 2017                      Money, money, money: Production and value of Palmyrene funerary portraits  
*Palmyra Portrait Project lecture series*  
Julia Steding (Aarhus University)
- 9 May 2017                      Planting for power: Horti, botanical imperialism and elite identity in ancient Rome  
*UrbNet lecture series*  
Annalisa Marzano (University of Reading)
- 10 May 2017                     Rank-size analysis and ancient urban systems: Some considerations  
*UrbNet lecture series*  
Annalisa Marzano (University of Reading)
- 22 May 2017                     Religion and the city: Alternatives to civic religion  
*UrbNet lecture series*  
Jörg Rüpke (Max-Weber-Kolleg, Universität Erfurt)
- 23 May 2017                     Abbasid Baghdad: City of power and city of culture  
*UrbNet lecture series*  
Hugh Kennedy (SOAS, University of London)
- 6 June 2017                      The colours of Palmyra: Ancient polychromy and the application of new natural-scientific  
methods *Palmyra Portrait Project lecture series*  
Cecilie Brøns (Ny Carlsberg Glyptotek) and Luise Ø. Brandt (Aarhus University)
- 13 June 2017                     Recovering lost wonders of the world: Pheidias's Athena Parthenos and Zeus Olympios  
*Palmyra Portrait Project lecture series*  
Kenneth Lapatin (J. Paul Getty Museum)
- 20 June 2017                     The Early Islamic urban network in northeastern Mesopotamia  
*UrbNet lecture series*  
Karel Nováček (Palacký University of Olomouc)



Corroded silver scroll in its case, found in Jerash (Photo: Danish–German Jerash Northwest Quarter Project).

- 20 June 2017  
MERCURY: Simulating the Roman economy  
*UrbNet lecture series*  
Tom Brughmans (University of Oxford)
- 19 September 2017  
Nothing but the truth, only the truth – and my version of it: Archaeology in Ribe c. 1730–1990/95  
*UrbNet lecture series*  
Per K. Madsen (National Museum of Denmark)
- 19 September 2017  
Nyt blik på Ribes markedsplads: Sidste nyt fra Northern Emporium projektet udgravning  
*UrbNet lecture series*  
Claus Feveile (Museum of Southwest Jutland) and Søren M. Sindbæk (Aarhus University)
- 26 September 2017  
Economy in Early Medieval Europe AD 400–1100: An archaeological perspective  
*UrbNet lecture series*  
Martin Biddle (Hertford College)
- 2 October 2017  
Urban networks in the Roman Near East: Lines of enquiry  
*UrbNet Residential Scholar lecture series: The dynamics of urban networks in the Near East, 1st century CE–8th century CE*  
Rubina Raja (Aarhus University)
- 3 October 2017  
Capital considerations: Winchester and the birth of urban  
*UrbNet lecture series*  
Martin Biddle (Hertford College)
- 9 October 2017  
Palmyra: A network node at the centre or at the edge? A matter of perspective  
*UrbNet Residential Scholar lecture series: The dynamics of urban networks in the Near East, 1st century CE–8th century CE*  
Rubina Raja (Aarhus University)





View of the main street in Palmyra towards the tetrakoinon (Photo: Rubina Raja).

- 10 October 2017                      An agent-based model of trade in the East Roman Empire (25 BC–AD 150)  
*UrbNet lecture series*  
Simon Carrignon (CASE, Barcelona Supercomputing Center)
- 23 October 2017                      Gerasa in the Decapolis: Local, regional and imperial networks  
*UrbNet Residential Scholar lecture series: The dynamics of urban networks in the Near East, 1st century CE–8th century CE*  
Rubina Raja (Aarhus University)
- 25 October 2017                      Essouk-Tadmekka: An Early Islamic trans-Saharan market town  
*UrbNet lecture series*  
Visiting researcher Sam Nixon (University of East Anglia)
- 31 October 2017                      A bunch of scrap? A summary of metal analyses from the North-West Quarter Project  
*UrbNet lecture series*  
Thomas Birch (Aarhus University) and Vana Orfanou (Aarhus University)
- 7 November 2017                      Town-dwellers: Urban actors and subjective interactionism in high-medieval Sigtuna and Nyköping  
*UrbNet lecture series*  
Mats Roslund (Lund University)
- 20 November 2017                      The stuff of people: How and why things and ideas moved around  
*UrbNet Residential Scholar lecture series: The dynamics of urban networks in the Near East, 1st century CE–8th century CE*  
Rubina Raja (Aarhus University)
- 20 November 2017                      Urban matters: From the detail to the map that matters  
*UrbNet Residential Scholar lecture series: The dynamics of urban networks in the Near East, 1st century CE–8th century CE*  
Rubina Raja (Aarhus University)



The South Theatre in Jerash, Jordan (Photo: Charlotte H. K. Christensen).

21 November 2017

New Italian–Danish excavations on the Forum of Caesar in Rome

*UrbNet lecture series*

Jan Kindberg Jacobsen (Ny Carlsberg Glyptotek)

28 November 2017

Historical ecology, applied archaeology, and the idea of a useable past

*UrbNet lecture series*

Christian Isendahl (University of Gothenburg)



Iron slag (hammerscale) recovered from sieves at Unguja Ukuu 2017 summer (Photo: Ema Bauzyte).



View of Jerash, Jordan (Photo: Danish-German Jerash Northwest Quarter Project).

## Other events

- |                  |  |
|------------------|--|
| 24 February 2017 | Exhibition opening: <i>Jerash et Dansk-Tysk Udgravningsprojekt i Jordan</i> , Museum of Ancient Art, Aarhus, Denmark |
| 1 May 2017       | UrbNet Centre Day with presentations, Aarhus, Denmark  |
| 2 May 2017       | 2nd Annual Meeting with the Danish National Research Foundation, Aarhus, Denmark                                     |
| 7 June 2017      | UrbNet Centre Day with presentations, Aarhus, Denmark  |
| 7 June 2017      | UrbNet Summer Celebration, Aarhus, Denmark   |
| 26-27 June 2017  | UrbNet core group retreat, Odder, Denmark  |
| 27 November 2017 | ERFA meeting for DNRF administrators at Aarhus University, Aarhus, Denmark   |



Ruins of a mosque at Tumbé, Pemba island (Photo: Ema Bauzyté).

## PhD Courses

17–18 May 2017

*Isotopes in Archaeology*

PhD programme, Faculty of Arts, Aarhus University, Denmark

Organisers: Federica Sulas (Aarhus University) and Rubina Raja (Aarhus University)

23–24 November 2017

*High-Definition Chronologies*

PhD programme, Faculty of Arts, Aarhus University, Denmark

Organisers: Thomas Birch (Aarhus University) and Michael Blömer (Aarhus University)

6–7 December 2017

*Networks in Archaeology*

PhD programme, Faculty of Arts, Aarhus University, Denmark

Organisers: Rubina Raja (Aarhus University) and Søren M. Sindbæk (Aarhus University)

13–16 December 2017

*Kolloquium Phd/Post-Doc der Klassischen Archäologie im Wintersemester 2017/2018*

*Archäologisches Kolloquium*

Christian-Albrechts-Universität zu Kiel

Organisers: Annette Haug (Christian-Albrechts-Universität zu Kiel), Rubina Raja (Aarhus University) and Søren M. Sindbæk (Aarhus University)



Fragment of a clay tuyere used for iron smithing found at Unguja Ukuu 2017 summer (Photo: Ema Bauzyté).



## AU-External Visitors

17–20 January 2017	Roland Fletcher (University of Sydney)
18–20 January 2017	Alex Metcalfe (Lancaster University)
18–20 January 2017	Anna-Katharina Rieger (Max-Weber-Kolleg, Universität Erfurt)
18–20 January 2017	Eivind Heldaas Seland (University of Bergen)
18–20 January 2017	Elizabeth Murphy (Koc University)
18–20 January 2017	Heinrich Härke (Eberhard Karls Universität Tübingen)
18–20 January 2017	Irina Aržantseva (University of Moscow)
18–20 January 2017	Johannes Preiser-Kapeller (Austrian Academy of Sciences)
18 January 2017	Jesper Langkilde (Roskilde Museum)
18–20 January 2017	Jette Linaa (Moesgaard Museum)
18–20 January 2017	Morten Søvsø (Museum of Southwest Jutland)
18–20 January 2017	Nicholas Purcell (Oxford University)
18–20 January 2017	Peter Taylor (Loughborough University)
18–20 January 2017	Pierre-Yves Manguin (École Française d'Extrême-Orient)
18–20 January 2017	Tom Brughmans (University of Konstanz)
6–9 February 2017	Georg Kalaitzoglou (Westfälische Wilhelms-Universität Münster)
6 February 2017	Ted Kaizer (Durham University)
6 February 2017	Nathanael J. Andrade (Binghamton University)
6 February 2017	Sanne Klaver (University of Amsterdam)
6 February 2017	Ville Vuolanto (University of Tampere)
7–8 February 2017	Miguel John Versluys (University of Leiden)



*A fragment of a clay casting mould for a beautifully ornamented dress ornament. This mould would have been for an extravagant, elongated, so-called equal-arm brooch used to fasten the cape of a woman's costume (Photo: Museum of Southwest Jutland).*

7–10 February 2017	Mahir Hrnjic (Independent researcher)
28 February–2 March 2017	Bernd Leisen (Archäologischer Park Xanten)
28 February–2 March 2017	Elizabeth Osinga (University of Southampton)
28 February–2 March 2016	Lisa Berger (Universität zu Köln)
28 February–2 March 2017	Stephen Merkel (Bergbau Museum Bochum)
28 February–3 March 2017	Gerwulf Schneider (Freie Universität Berlin)
28 February–3 March 2017	Malgorzata Daszkiewicz (Freie Universität Berlin)
28 February–4 March 2017	Achim Lichtenberger (Westfälische Wilhelms-Universität Münster)
28 February–4 March 2017	Alan Walmsley (University of Copenhagen)
28 February–4 March 2017	Daniela Baldoni (Missione Archeologica Italiana a Jerash)
28 February–4 March 2017	Don Boyer (University of Western Australia)
28 February–4 March 2017	Georg Kalaitzoglou (Westfälische Wilhelms-Universität Münster)
28 February–4 March 2017	Jacques Seigne (Université François-Rabelais)
1–4 March 2017	Ali al Khayyat (Jerash Governorate, Department of Antiquities, Jerash)
1–4 March 2017	Ian Simpson (University of Sterling)
1–4 March 2017	Karen Elizabeth Spencer (University of Copenhagen)
1–4 March 2017	Louise Blanke (University of Oxford)
1–4 March 2017	Massimo Brizzi (Missione Archeologica Italiana a Jerash)
1–4 March 2017	Maysoon al-Naher (University of Jordan)
1–4 March 2017	Pierre-Louis Gatier (Université Lumière-Lyon)
1–4 March 2017	Thomas Lepaon (Mission Archéologique Française de Jerash)



*Part of a comb cut from multiple pieces of deer antler and assembled with iron rivets. The most intriguing detail was added by a set of runic inscriptions. The detail shows the runes kq[m]baR - 'comb' (Photo: Museum of Southwest Jutland).*

2–3 March 2017	Anna Minor (University of Copenhagen)
2–3 March 2017	Ingrid Schulze (Independent scholar)
2–3 March 2017	Wolfgang Schulze (Independent scholar)
2–3 March 2017	Brita Jansen (Independent researcher, Bremen)
2–3 March 2017	Dennis Skjalm (University of Copenhagen)
2–3 March 2017	Elise Thing (University of Copenhagen)
2–3 March 2017	Helle Drusebjerg (University of Copenhagen)
2–3 March 2017	Lena Tambs (Universität zu Köln)
2–3 March 2017	Nora Voss (University of Vienna)
2–3 March 2017	Patricia Bojesen (University of Copenhagen)
2–3 March 2017	Pernille Bangsgaard (Natural History Museum of Denmark)
2–3 March 2017	Silke Müth-Frederiksen (Natural Museum of Denmark)
2–3 March 2017	Susanne Kerner (University of Copenhagen)
2–3 March 2017	Ulla Søhuus (University of Copenhagen)
2–3 March 2017	Aisha Mellah (University of Copenhagen)
2–3 March 2017	Alex Wood (University of Copenhagen)
3 March–31 August 2017	Nino Praisler (University of Würzburg)
7 March 2017	Paroma Chatterjee (University of Michigan)
25–27 April 2017	Chloe Duckworth (University of Leicester)
27–28 April 2017	Barbora Wouters (Vrije Universiteit Brussels)
27–28 April 2017	Pieterjan Deckers (Vrije Universiteit Brussels)



A cache of three pewter ornaments, decorated with cross symbols, found in a 9th-century house floor (Photo: Museum of Southwest Jutland).

1–25 May 2017	Annalisa Marzano (University of Reading)
2–4 May 2017	Ian Freestone (UCL)
17 May 2017	Anna Bini (University of Sassari)
17 May 2017	Bettina Livermore (Centre for Star and Planet Formation, SNM)
17 May 2017	Helene Rose (Centre for Baltic and Scandinavian Archaeology)
17 May 2017	James Dodd (Aarhus University)
17 May 2017	Marcello Mannino (Aarhus University)
17 May 2017	Mikael Larsson (Lund University)
17 May 2017	Rebecca Fraser (Christian-Albrechts-Universität zu Kiel)
17 May 2017	Rikke Maring (Aarhus University)
17 May 2017	Tamsin O'Connell (University of Cambridge)
17 May 2017	Trine Nielsen (Aarhus University)
18–22 May 2017	Lara Weiss (Max-Weber-Kolleg, Universität Erfurt)
18–23 May 2017	Jörg Rüpke (Max-Weber-Kolleg, Universität Erfurt)
19–20 May 2017	Maik Patzelt (Max-Weber-Kolleg, Universität Erfurt)
19–21 May 2017	Janico Albrecht (Max-Weber-Kolleg, Universität Erfurt)
19–22 May 2017	Benjamin Sippel (Max-Weber-Kolleg, Universität Erfurt)
19–22 May 2017	Emiliano Urciuoli (Max-Weber-Kolleg, Universität Erfurt)
19–22 May 2017	Katharina Rieger (Max-Weber-Kolleg, Universität Erfurt)
19–22 May 2017	Richard Gordon (Max-Weber-Kolleg, Universität Erfurt)
23 May 2017	Hugh Kennedy (SOAS, University of London)





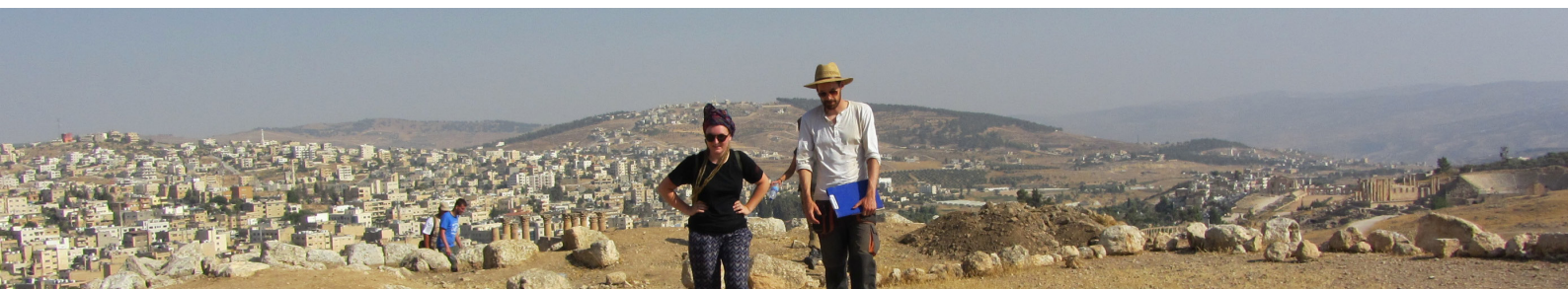
View of rock-cut facade in Petra, southern Jordan (Photo: Danish-German Jerash Northwest Quarter Project).

5–7 June 2017	Karel Nováček (Palacký University of Olomouc, Czechia)
7 June 2017	Anne Marie Pahuus (Aarhus University)
7 June 2017	Else Roesdahl (Aarhus University)
7 June 2017	Felix Riede (Aarhus University)
7 June 2017	Isabelle Torrance (Aarhus Institute of Advanced Studies)
7 June 2017	Lars Krants Larsen (Moesgaard Museum)
7 June 2017	Lise Hannestad (Aarhus University)
7 June 2017	Marianne Birn (Aarhus University)
7 June 2017	Mette Svart Kristiansen (Aarhus University)
7 June 2017	Michael Qvortrup (AU Library, Moesgaard)
7 June 2017	Niels Hannestad (Aarhus University)
7 June 2017	Welmoed Out (Moesgaard Museum)
7 June 2017	Cecilie Brøns (Ny Carlsberg Glyptotek)
12 June–17 June 2017	Kenneth Lapatin (The J. Paul Getty Museum)
13 June–17 June 2017	Achim Lichtenberger (Westfälische Wilhelms-Universität Münster)
13 June–17 June 2017	Christopher Hallett (UC Berkeley)
13 June–18 June 2017	Michael A. Speidel (Universität Zürich)
14 June–17 June 2017	Andrea De Giorgi (Florida State University)
14 June–17 June 2017	Bilal Annan (Institut Français du Proche-Orient)
14 June–17 June 2017	Helen Ackers (Duke University)
14 June–17 June 2017	Jutta Rumscheid (Universität Bonn)



*A Roman seal impression with Iuppiter Dolichenus shaking hand with a Roman emperor after its discovery (Photo Peter Jülich).*

14 June–17 June 2017	Karl-Uwe Mahler (Johannes Gutenberg-Universität Mainz)
14 June–17 June 2017	Kutalmış Görkay (Ankara University)
14 June–18 June 2017	Sheila Dillon (New York University)
15–16 June 2017	Anne Marie Nielsen (Ny Carlsberg Glyptotek)
15–16 June 2017	Amalie Skovmøller (University of Copenhagen, SAXO Institute)
15–16 June 2017	Cecilie Brøns (Ny Carlsberg Glyptotek)
15–16 June 2017	Christian Jørgensen (Aarhus University)
15–16 June 2017	Heike Richter (Göthe Universität Frankfurt am Main)
15–16 June 2017	Jan Stubbe Østergaard (Independent researcher)
15–16 June 2017	Kristine Bøggild Johannsen (Thorvaldsens Museum)
15–16 June 2017	Kristine Bülow (University of Copenhagen)
15–16 June 2017	Niels Hannestad (Aarhus University)
15–16 June 2017	Bjarne Purup (University of Copenhagen)
15–16 June 2017	Silke Müth-Frederiksen (Natural History Museum of Denmark)
15 June–16 July 2017	Alix Thoeming (University of Sydney) (Visiting PhD student)
19–21 June 2017	Tom Brughmans (University of Konstanz)
22 June 2017	Christopher Evans (Cambridge Archaeological Unit)
22 June 2017	Jan K. Jacobsen (The Danish Institute in Rome)
22 June 2017	Niels Hannestad (Aarhus University)
22 June 2017	Sine G. Saxkjær (The Danish Institute in Rome)
19 September 2017	Per Kristian Madsen (National Museum of Denmark)



Students at the excavation in Jerash, Jordan (Photo: Charlotte H. K. Christensen).

20–22 September 2017	Eivind Heldaas Seland (University of Bergen)
20–22 September 2017	Tommaso Gnoli (Università di Bologna)
20–23 September 2017	Alexandra Kubiak-Schneider (University of Warsaw)
20–23 September 2017	Annie Sartre-Fauriat (Université d'Artois / HiSoMa)
20–23 September 2017	Dagmara Wielgosz-Rondolino (University of Warsaw)
20–23 September 2017	Eleonora Cussini (Università Ca'Foscari Venezia)
20–23 September 2017	Jean-Baptiste Yon (Laboratoire HiSoMa)
20–23 September 2017	Jørgen Christian Meyer (University of Bergen)
20–23 September 2017	Lucinda Dirven (University of Amsterdam)
20–23 September 2017	Maura Heyn (University of North Carolina – Greensboro)
20–23 September 2017	Maurice Sartre (Université Francois-Rabelais, Tours)
20–23 September 2017	Nathanael Andrade (University of Binghamton)
20–23 September 2017	Rory McInnes-Gibbons (University of Durham)
20–23 September 2017	Sanne Klaver (University of Amsterdam)
20–23 September 2017	Ted Kaizer (University of Durham)
21–22 September 2017	Ann-Christine Sander (University of Oldenburg)
24–27 September 2017	Hajnalka Herold (University of Exeter)
1–31 October 2017	Sam Nixon (University of East Anglia)
2–3 October 2017	Martin Biddle (Hertford College)
4–6 October 2017	Clarissa Blume (Ruhr-Universität Bochum)
4–6 October 2017	Jeanine Abdul Massih (Lebanese University)



Group of clay sealings (Photo: Forschungsstelle Asia Minor).

4–6 October 2017	Will Wootton (King's College London)
4–7 October 2017	Amanda Claridge (Royal Holloway, University of London)
9–12 October 2017	Iza Romanowska (Barcelona Supercomputing Center, CASE)
9–12 October 2017	Simon Carrignon (Barcelona Supercomputing Center, CASE)
9–12 October 2017	Tom Brughmans (University of Oxford)
10–11 October 2017	Marie Louise Schjellerup Jørskov (University of Copenhagen)
10–12 October 2017	Pernille Bangsgaard (Natural History Museum of Denmark)
10–12 October 2017	Christoph Eger (Freie Universität Berlin)
10–13 October 2017	Achim Lichtenberger (Westfälische Wilhelms-Universität Münster)
10–13 October 2017	Philip Ebeling (Westfälische Wilhelms-Universität Münster)
10–13 October 2017	Alexandra Uscatescu (Universidad Complutense Madrid)
11 October 2017	Margit Pedersen (Viborg Museum)
11–13 October 2017	Agnes Vokaer (Université Libre de Bruxelles)
11–13 October 2017	Anne-Michèle Rasson-Seigne (Université François-Rabelais Tours)
11–13 October 2017	Jacques Seigne (Université François-Rabelais Tours)
23–24 October 2017	Helle Horsnæs (National Museum of Denmark)
23–25 October 2017	Christoph Kilger (Uppsala University)
23–25 October 2017	Martin Allen (Fitzwilliam Museum, University of Cambridge)
23–25 October 2017	Silke Hahn (Goethe-Universität, Frankfurt am Main)
23–25 October 2017	Svein Harald Gullbekk (Kulturhistorisk Museum, University of Oslo)
7 November 2017	Mats Roslund (Lund University)



View of Jerash, Jordan (Photo: Philip Ebeling).

- 15 November 2017 Eske Willerslev (Centre for Geogenetics, Natural History Museum of Denmark)
- 15–17 November 2017 Alex Bayliss (Historic England)
- 15–17 November 2017 Axel Christophersen (Norwegian University of Sciences and Technology/NTNU)
- 15–17 November 2017 Ian Freestone (UCL)
- 15–17 November 2017 Jessica Hendy (University of York)
- 15–17 November 2017 Mikkel Winther Pedersen (Centre for Geogenetics, Natural History Museum of Denmark)
- 15–17 November 2017 Steve Ashby (University of York)
- 20–22 November 2017 Jan K. Jacobsen (The Danish Institute in Rome)
- 28 November 2017 Christian Isendahl (University of Gothenburg)
- 5–7 December 2017 Tom Brughmans (University of Oxford)



This elegant comb was cut from multiple pieces of deer antler and assembled with iron rivets. The most intriguing detail was added by a set of runic inscriptions. The detail shows the runes *ka[m]baR* – ‘comb’ (Photo: Museum of Southwest Jutland).

## Collaborators

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**Amelung, Wulf:** Universität Bonn, Germany

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**Larsen, Lars K.:** Moesgaard Museum, Denmark

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- Søvsø, Morten:** Museum of Southwest Jutland, Denmark
- Theodoropoulou-Polychroniadis, Zetta:** Greek Archaeological Committee UK (GACUK), United Kingdom
- Ting, Carmen:** University of Cyprus, Cyprus
- Toreld, Christina:** Museum of Bohuslän, Sweden
- Trinderup, Camilla Himmelstrup:** DTU COMPUTE
- Tsaravopoulos, Aris:** Greek Ministry of Culture, Greece
- Turner, Sam:** University of Newcastle, UK
- Tys, Dries:** Vrije Universiteit Brussels, Belgium
- Ulriksen, Jens:** Museum South East Denmark, Denmark
- Vernet, Thomas:** Institut Français d'Afrique du Sud, Johannesburg, South Africa
- Versluys, Miguel J.:** Leiden University, The Netherlands



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**Zarmakoupi, Mantha:** University of Birmingham, UK



Sampling in Ribe (Photo: Museum of Southwest Jutland).

## Invited Talks

Sara Ringsborg, Representations of children in Palmyrene funerary sculpture from the first to the third century CE, Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Rubina Raja, Funerary sculpture in Palmyra: The Palmyra Portrait Project, Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Rubina Raja, Palmyrene priests: Positions or professions? Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Rubina Raja, The function of attributes in Palmyrene portraiture, Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Signe Krag, Potrayal of women in Palmyrene sarcophagi and banquet reliefs, Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Rubina Raja, New archaeological research in ancient Gerasa (Jerash): The Danish-German Northwest Quarter Project, Conference: *118th Annual Meeting of the Archaeological Institute of America*, University of Toronto, Toronto, Canada, 8 January 2017.

Rubina Raja and Søren M. Sindbæk, Welcome and introduction, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Heike Möller, Gerasa (Jordan): Pottery production and trade networks in Roman to Early Islamic times, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Kirstine Haase and Neeke Hammers, Resource networks: Tracing the trigger for societal change through food and artefact networks in medieval Odense, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Olav E. Gundersen, The right tool for the job: Reflections on how to approach the numismatic material in an urban context, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Rubina Raja, Network evolutions, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Stephanie Wynne-Jones, Networks of authority and networks of things in the western Indian Ocean, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Søren M. Sindbæk, Network evolutions: Introduction, Conference: *Network Evolutions*, UrbNet, Aarhus University, Aarhus, Denmark, 18 January 2017.

Rubina Raja, Antiocheia-on-the-Chrysorroas-formerly-called-Gerasa: New archaeological research, *Classical Seminar Series*, Ioannou Centre for Classical and Byzantine Studies, University of Oxford, Oxford, United Kingdom, 20 January 2017.

Rubina Raja, It stays in the family: Palmyrene priests and their iconography, Conference: *Representations of Women and Children in Roman-Period Palmyra: Part II*, Aarhus University, Aarhus, Denmark, 6 February 2017.

Genevieve Holdridge, Late quaternary paleohydrology of Arroyo cycles in the Mixteca Alta Mexico: Insights from past and present alluvial stratigraphy, Meeting: *Earth Surface Sector*, Institute for Geoscience, Aarhus University, Aarhus, Denmark, 14 February 2017.

Hanna Dahlström, Towards the making of a town: A study of urbanity as life form in medieval Copenhagen, Workshop: *Social Practice Theory and Its Application for Urban Archaeology*, Uppsala University, Gotland, Sweden, 15 February 2017.

Rubina Raja and Heike Möller, Welcome and introduction, Conference: *Regional Networks: Technological Transfers? Production and Consumption Patterns in Roman Pottery of the Decapolis*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 1 March 2017.

Rubina Raja, New research in the Northwest Quarter of Jerash and its impact on Roman Gerasa, Conference: *Regional Networks: Technological Transfers? Production and Consumption Patterns in Roman Pottery of the Decapolis*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 1 March 2017.

Heike Möller, Roman Gerasa: New Results from the Danish-German Jerash Northwest Quarter Project – Contexts and Finds, Conference: *Regional Networks: Technological Transfers? Production and Consumption Patterns in Roman Pottery of the Decapolis*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 1 March 2017.

Rubina Raja, Introduction, Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2 March 2017.

Genevieve Holdridge, Kristine Thomsen and Søren M. Kristiansen, Soils, sediments and environmental history: Introducing geosciences to archaeology at Jerash, Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2 March 2017.

Heike Möller, High pottery quantity: Some remarks on ceramics in context from the Danish-German Jerash Northwest Quarter Project, Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2 March 2017.

Gry Barfod, Forensic investigations of the Jerash glass, Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2 March 2017.

Rubina Raja, Archaeological research in Jerash and the Danish-German Northwest Quarter Project 2011–2016, Conference: *The Archaeology and History of Jerash: 110 Years of Excavations*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2 March 2017.

Michael Blömer, Conservation strategies for Doliche/Dülük Baba Tepesi, Deutsches Archäologisches Institut, Istanbul, Turkey, 4 March 2017.

Kirstine Haase, Materialiserede netværk: Om at spore kilden til samfundsmæssige forandringer gennem handelsnetværk i middelalderens Odense, Seminar: *Netværk i Teori og Praksis, Center for Maritim- og Erhvervshistorie*, University of Southern Denmark, Odense, Denmark, 7 March 2017.

Sara Ringsborg, Children in Palmyrene funerary epigraphy, Lecture series: *The Palmyra Portrait Project*, Aarhus University, Aarhus, Denmark, 7 March 2017.

Søren M. Sindbæk, Anomalocivitas on urban evolutions, Department of Archaeology and Ancient History, Uppsala University, Uppsala, Sweden, 8 March 2017.

Michael Blömer, The Doliche Excavation Project, Conference: *Faglig Dag*, Department of Classical Studies, Aarhus University, Aarhus, Denmark, 10 March 2017.

Søren M. Sindbæk, Communities on the edge: Piecing together the North Sea emporia, Conference: *Communautés Maritimes et Insulaires du Premier Moyen Âge*, Centre Universitaire du Musée, Boulogne-sur-Mer, France, 10 March 2017.

Søren M. Sindbæk, The Northern Emporium project, Workshop: *Urban Field Methods*, Museum of Southwest Jutland, Ribe, Denmark, 13 March 2017.

Ema Bauzyté and Federica Sulas, Zanzibar: Producing iron and negotiating urban landscapes, UrbNet, Aarhus University, Aarhus, Denmark, 14 March 2017.

Rubina Raja, RUIN (Dialogue evening with Bjørn Nørgaard and Rubina Raja arranged by Ny Carlsberg Glyptotek, the Carlsberg Foundation, the Ny Carlsberg Foundation and Carlsberg Laboratories), Ny Carlsberg Glyptotek, Copenhagen, Denmark, 16 March 2017.

Neeke Hammers, Trade, import and urban development in medieval Denmark, Meeting: *George Pitt Rivers Laboratory meeting*, MacDonald Institute for Archaeological Research, University of Cambridge, Cambridge, United Kingdom, 17 March 2017.

Søren M. Sindbæk, Anomalocivitas: On urban evolutions, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 21 March 2017.

Hanna Dahlström, Søren M. Sindbæk, Jesper Olsen and Kirstine Haase, AMS dating and bayesian modelling used on Copenhagen's early medieval cemeteries, Aarhus University, Aarhus, Denmark, 28 March 2017.

Michael Blömer, Depicting the dead in North Syria: Funerary representations in Roman Commagene and Cyrrhestice, Lecture series: *The Palmyra Portrait Project*, Aarhus University, Aarhus, Denmark, 4 April 2017.

Kirstine Haase, Thomas B. Thriges Gade udgravningerne: Resultater og perspektiver, Meeting: *Middelalderarkæologisk Forum Træf 2017*, Aarhus University, Aarhus, Denmark, 7 April 2017.

Luise Ø. Brandt, Forhistoriske dyr afsløres af proteiner: Nye undersøgelser af forhistoriens klædedragter, Conference: *Vin og Videnskab*, Natural History Museum of Denmark, Copenhagen, Denmark, 12 April 2017.

Rubina Raja and Søren M. Sindbæk, Forsvundne byer: Arkæologiens store fortællinger, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 18 April 2017.

Genevieve Holdridge, Late quaternary paleohydrology of Arroyo cycles in the Mixteca Alta Mexico: Insights from past and present alluvial stratigraphy, Conference: *European Geosciences Union General Assembly 2017*, European Geosciences Union, Vienna, Austria, 25 April 2017.

Genevieve Holdridge, Landscape stability and water management around the ancient city Jerash, Jordan, Conference: *European Geosciences Union General Assembly 2017*, European Geosciences Union, Vienna, Austria, 26 April 2017.

Rubina Raja, The Palmyrene Funerary Portraits: A Portrait Habit between East and West, Humboldt-Universität zu Berlin, Berlin, Germany, 26 April 2017.

Rubina Raja, Negotiating social and cultural interaction through priesthoods: The iconography of priesthood in Palmyra, Conference: *The Middle East as Middle Ground*, University of Cologne, Cologne, Germany, 27 April 2017.

Vana Orfanou, Tradition and change in copper-based metallurgical practices in early Greece (10th to 7th c. BC), Conference: *Archaeometallurgy: What is It Good for?* Department of Archaeology and Heritage Studies, Aarhus University, Aarhus, Denmark, 27 April 2017.

Michael Blömer, Doliche in Turkey: The city of Jupiter, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 2 May 2017.

Federica Sulas, Urban transitions and resilience in medieval Africa, *2nd Follow-Up Meeting with the Danish National Research Foundation*, UrbNet, Aarhus University, Aarhus, Denmark, 2 May 2017.

Kristine Thomsen, Urban life in Jerash: Development of mortar and plaster from a diachronic perspective, *2nd Follow-Up Meeting with the Danish National Research Foundation*, UrbNet, Aarhus University, Aarhus, Denmark, 2 May 2017.

Julia Steding, Money, money, money: Production and value of Palmyrene portraits, Lecture series: *The Palmyra Portrait Project*, Aarhus University, Aarhus, Denmark, 3 May 2017.

Rubina Raja, Karavanebyen Palmyra, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 9 May 2017.

Michael Blömer, A new Macedonia? Redefining urban development in Hellenistic North Syria, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 9 May 2017.

Signe Krag, Portraying Palmyrene Women: First century BC to third century AD, Department of Classics and Ancient History, Durham University, Durham, United Kingdom, 11 May 2017.

Søren M. Sindbæk, Vikingernes Ribe, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 16 May 2017.

Rubina Raja, Communication of research to the broader public: The impact of media, UrbNet, Aarhus University, Aarhus, Denmark, 23 May 2017.

Federica Sulas, The Obelisks of Axum and the queen of Sheba, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 23 May 2017.

Bjørn Poulsen, De danske byer i middelalderen, Conference: *Dies Medievalis*, Nyborg Slot, Nyborg, Denmark, 29 May 2017.

Kirstine Haase, Den genfundne karré i Knuds by: Middelalderens Odense, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Copenhagen, Denmark, 30 May 2017.

Thomas Birch, A Viking hoard of iron blooms: Iron production at a Chieftain's Farm in Vatnsfjörður, Northwest Iceland, Conference: *Iron in Archaeology: Bloomery Smelters and Blacksmiths in Europe and beyond*, Archeologický Ústav AV ČR, Prague, Czech Republic, 30 May 2017.

Ema Bauzyté, East African iron production processes and productions in 7th–10th centuries AD, Conference: *Iron in Archaeology: Bloomery Smelters and Blacksmiths in Europe and beyond*, Archeologický Ústav AV ČR, Prague, Czech Republic, 30 May 2017.

Eva Mortensen, Artemistemplet i Ephesos, Lecture series: *Antikkens Syv Vidundere*, The Danish University Extension, Aarhus, Denmark, 31 May 2017.

Thomas Birch, Bars, coins and scrap: Seaborne connections and urbanising metals, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 6 June 2017.

Kristine Thomsen, Zeus-statuen i Olympia, Lecture series: *Antikkens Syv Vidundere*, The Danish University Extension, Aarhus, Denmark, 7 June 2017.

Luise Ø. Brandt, The colours of Palmyra: Ancient polychromy and the application of new natural–scientific methods, Aarhus University, Aarhus, Denmark, 11 June 2017.

Rubina Raja and Michael Blömer, Welcome, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15 June 2017.

Rubina Raja and Michael Blömer, Shifting the paradigms: Research on the funerary portraiture of Greater Roman Syria, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15 June 2017.

Michael Blömer, Funerary sculpture from the North Syrian Hinterland, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15 June 2017.

Signe Krag, Female funerary portraiture from Palmyra, Syria, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15 June 2017.

Rubina Raja, Public and funerary portraiture in Palmyra: Portrait habits at a crossroad, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15 June 2017.

Rubina Raja, Roman-period portrait habit in the funerary sculpture of northern Jordan: Local and foreign influences and their implications, Conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 16 June 2017.

Rubina Raja, Dirt, data and dating: Perspectives from an archaeological DNRF centre, Meeting: *Annual meeting at the Department of Molecular Biology and Genetics 2017*, Department of Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark, 16 June 2017.

Bjørn Poulsen, Medieval cod fishing in the Northern Atlantic: The origin of Bacalhau, Conference: *Queen, Cods, and Martyrs: Portugal and Denmark from the Viking Age till the Age of Discovery*, Museu da Marinha, Lisbon, Portugal, 21 June 2017.

Gry Barfod, Material analysis: The chemistry of urbanization, Workshop: *Excavating at Caesar's Forum in Rome*, UrbNet, Aarhus University, Aarhus, Denmark, 22 June 2017.

Michael Blömer, Organizational aspects of the Doliche excavations, Workshop: *Excavating at Caesar's Forum in Rome*, UrbNet, Aarhus University, Aarhus, Denmark, 22 June 2017.

Thomas Birch, Rome's rise to power as deduced by analysis of silver coinage, Conference: *Goldschmidt2017*, Le Palais des Congrès de Paris, Paris, France, 13 August 2017.

Bjørn Poulsen, Vandet og de danske middelalderbyer, Meeting: *Det 29. Nordiske Historikermøde*, Aalborg Kongrescenter, Aalborg, Denmark, 15 August 2017.

Hanna Dahlström, Fra havn til by: Seneste nyt om det ældste København, Museum of Copenhagen, Copenhagen, Denmark, 17 August 2017.

Kirstine Haase and Hanna Dahlström, Introduction to Urban encounters: The materiality of meetings in pre- and early modern towns, Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 30 August 2017.

Gry Barfod and Søren M. Sindbæk, Looking through a glass onion? Tracing the urban network of the early medieval bead maker, Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Neeke Hammers, Assessing crop cultivation and provision through stable isotope analysis on botanical remains from medieval Odense, Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Barbora Wouters, European towns in high definition: Micromorphology as a game changer for understanding early medieval and Viking-age urbanism (Hedeby, Germany), Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Barbora Wouters, Environmental evidence from early urban Antwerp: New data from archaeology, micromorphology, macrofauna and insect remains, Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Barbora Wouters, State formation in the landscape: The ringforts of Flanders and Zeeland (850–950), Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Barbora Wouters, Beyond burning and pillaging: Scandinavian presence and cultural influence in the southern low countries, Annual meeting: *Urban Encounters: The Materiality of Meetings in Pre- and Early Modern Towns*, European Association of Archaeologists, Maastricht, Netherlands, 31 August 2017.

Barbora Wouters, An integrated micromorphological and phytolith study of urban dark earths from Atuatuca Tungrorum (Tongeren, Belgium), Conference: *Developing International Geoarchaeology*, School of History, Classics and Archaeology, University of Newcastle, Newcastle, United Kingdom, 4 September 2017.

Neeke Hammers, Assessing crop cultivation and provision through stable isotope analysis on botanical remains from medieval Odense, Meeting: *Nordic Archaeobotany Group Meeting (NAG)*, University of Helsinki, Helsinki, Finland, 7 September 2017.

Rubina Raja, On urban network evolutions: The case of the Decapolis city Gerasa in Jordan, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 12 September 2017.

Rubina Raja, The Trojan War, the Iliad and the impact of early narratives on European identity formation, *Riksbankens Jubileumsfond*, Stockholm, Sweden, 19 September 2017.

Rubina Raja, Introduction, Conference: *Revisiting the Religious Life in Palmyra*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 21 September 2017.

Signe Krag, Women and religion in Palmyra, Conference: *Revisiting the Religious Life in Palmyra*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 21 September 2017.

Barbora Wouters, The use of micromorphology for analysing microstratified units in urban context, Conference: *SIKB-jaarcongres, Stichting Infrastructuur Kwaliteitsborging Bodembeheer*, Ede, Netherlands, 21 September 2017.

Rubina Raja, The so-called 'curtain of death' in the Palmyrene funerary sculpture, Conference: *Revisiting the Religious Life in Palmyra*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 22 September 2017.

Thomas Birch, A Viking hoard of iron blooms: Iron production at a Chieftain's Farm in Vatnsfjörður, Northwest Iceland, Lecture series: *Forskerforum Arkeologisk Museum*, Arkeologisk Museum, University of Stavanger, Stavanger, Norway, 26 September 2017.

Rubina Raja, Urban networks in the Roman Near East: Lines of enquiry, Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE-8th century CE*, UrbNet, Aarhus University, Aarhus, Denmark, 2 October 2017.

Federica Sulas, Water and urban resilience: Geoarchaeology of African early towns, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 3 October 2017.

Rubina Raja, Laokoön: En romersk skulpturgruppe, University of Southern Denmark, Odense, Denmark, 4 October 2017.

Michael Blömer, The production of local sculpture in Roman North Syria and the agency of stone material, Conference: *Production Economy in the region of wider Syria, Part I: Craftsmen and Production Techniques*, Aarhus University, Aarhus, Denmark, 5 October 2017.

Rubina Raja, Production economy: Lines of enquiry: The case of Palmyra, Conference: *Production Economy in the region of wider Syria, Part I: Craftsmen and Production Techniques*, Aarhus University, Aarhus, Denmark, 5 October 2017.

Julia Steding, Production and value of Palmyrene funerary portraiture, Conference: *Production Economy in the region of wider Syria, Part I: Craftsmen and Production Techniques*, Aarhus University, Aarhus, Denmark, 5 October 2017.

Rubina Raja, Palmyra: A network node at the centre or at the edge? A matter of perspective, Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE-8th century CE*, UrbNet, Aarhus University, Aarhus, Denmark, 9 October 2017.

Rubina Raja, Introduction to the Danish-German Northwest Quarter Project, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Jesper Olsen and Bente Philippsen, AMS dating and Bayesian statistics, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Søren M. Kristiansen and David Stott, LiDAR, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Gry Barfod, Glass, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Thomas Birch and Vana Orfanou, Archaeometallurgical projects at Jerash, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Signe Krag, Jewellery and textile production, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Kristine Thomsen, Plaster and mortar and wall-paintings, Workshop: *Specialist Workshop for the Danish-German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Alex Peterson, Medieval pottery, Workshop: *Specialist Workshop for the Danish–German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Sara Ringsborg, Stone objects, Workshop: *Specialist Workshop for the Danish–German Jerash Northwest Quarter Project*, UrbNet, Aarhus University, Aarhus, Denmark, 11 October 2017.

Rubina Raja, Introduction, Conference: *Cilician Wine, African Plates, Italian Cooking: Imported Pottery in the Decapolis in Roman to Early Islamic Times*, UrbNet, Aarhus University, Aarhus, Denmark, 12 October 2017.

Gry Barfod, Glass Imports in the ancient City of Gerasa, Conference: *Cilician Wine, African Plates, Italian Cooking: Imported Pottery in the Decapolis in Roman to Early Islamic Times*, UrbNet, Aarhus University, Aarhus, Denmark, 12 October 2017.

Rubina Raja, Ceramics from the Northwest Quarter in Jerash, Conference: *Cilician Wine, African Plates, Italian Cooking: Imported Pottery in the Decapolis in Roman to Early Islamic Times*, UrbNet, Aarhus University, Aarhus, Denmark, 12 October 2017.

Michael Blömer, Stadt und Kult im antiken Nordsyrien: Neue Forschungen in Doliche und im Heiligtum des Iuppiter Dolichenus, Kunsthalle, Kiel, Germany, 12 October 2017.

Rubina Raja, Gerasa in the Decapolis: Local, regional and imperial networks, Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE–8th century CE*, UrbNet, Aarhus University, Aarhus, Denmark, 23 October 2017.

Olav E. Gundersen, Crossing the Sound: Medieval Denmark's coinage across modern borders, Workshop: *Comparing the Numismatic Material across Modern Borders*, UrbNet, Aarhus University, Aarhus, Denmark, 24 October 2017.

Rubina Raja and Søren M. Sindbæk, Forsvundne byer: Arkæologiens store fortællinger, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 25 October 2017.

Sara Ringsborg, Status, age and gender in the Palmyrene funerary portraits of children, Conference: *ARACHNE VIII: Ages, Ageing and Old Age in the Greco–Roman World*, Department of Historical Studies, University of Gothenburg, Gothenburg, Sweden, 25 October 2017.

Vana Orfanou and Thomas Birch, A bunch of scrap? A summary of metal analyses from the northwest quarter, Jerash, UrbNet, Aarhus University, Aarhus, Denmark, 30 October 2017.

Kristine Thomsen, Cæsars Forum, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 1 November 2017.

Eva Mortensen, Visiting Jerash in the nineteenth century, Lecture series: *Classical Antiquity and Its Heritage Research Seminar*, Aarhus University, Aarhus, Denmark, 1 November 2017.

Rubina Raja, Open data: Potentials, pitfalls and possibilities, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 3 November 2017.

Signe Krag, Palmyrene funerary portraits: First century BC to the third century AD, Archäologisches Kolloquium, University of Cologne, Cologne, Germany, 7 November 2017.

Christopher Dickenson, Public space and urban networks in the ancient world: Hellenistic and Roman Messene as a case study, Lecture series: *Urban Network Evolutions*, The Danish Institute in Athens, Athens, Greece, 7 November 2017.

Rubina Raja, Welcome and introduction, Conference: *Urban Religion in Late Antiquity*, Augustinerkloster, Erfurt, Germany, 8 November 2017.

Michael Blömer, The urbanisation of sacred spaces in Byzantine Syria, Conference: *Urban Religion in Late Antiquity*, Augustinerkloster, Erfurt, Germany, 8 November 2017.

Rubina Raja, Urban religion in Late Antique Antiochia–on–the–Chrysorrhoeas–formerly–called–Gerasa, Conference: *Urban Religion in Late Antiquity*, Augustinerkloster, Erfurt, Germany, 8 November 2017.

Søren M. Sindbæk, Vikingernes Ribe, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 8 November 2017.

Federica Sulas, Geoarchaeological approaches to urban living: Refining scales, contexts and processes at work in medieval African towns, Department of Archaeology and Ancient History, Lund University, Lund, Sweden, 13 November 2017.



Hanna Dahlström, Towards the making of a town: A study of urbanity as life form in medieval Copenhagen, Department of Archaeology and Ancient History, Lund University, Lund, Sweden, 13 November 2017.

Rubina Raja, Towards new lines of enquiry in urban archaeology: Urban networks and dynamics, Department of Archaeology and Ancient History, Lund University, Lund, Sweden, 13 November 2017.

Luise Brandt, Fur and skin trade in Viking Age: An interdisciplinary approach, Workshop: *Domestic Animals in the Viking Age: Migration, Trade, Environmental Adaptation and the Potential of Multidisciplinary Studies*, Natural Resources Institute Finland, Turku, Finland, 13 November 2017.

Vana Orfanou, Means, aims and challenges of archaeometallurgy and the Viking Ribe project, Department of Archaeology and Ancient History, Lund University, Lund, Sweden, 13 November 2017.

Michael Blömer, Doliche in Turkey: The city of Jupiter, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 15 November 2017.

Rubina Raja and Søren M. Sindbæk, Introduction, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 15 November 2017.

Federica Sulas, African urban landscapes over time: Idiosyncrasies, expressions and contexts, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 15 November 2017.

Søren M. Kristiansen and David Stott, Non-destructive investigations of the Viking Age fortification Borgring, Annual meeting: *Kultur-, Naturhistorisk og Kunstfagligt Orienteringsmøde 2017*, Organisationen Danske Museer, Vejle, Denmark, 15 November 2017.

Kristine Thomsen, More than meets the eye: New strategies for analyzing mortar and plaster, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 16 November 2017.

Søren M. Kristiansen and Federica Sulas, Beyond dirt: The untapped potential of soils and sediments to heritage management and practice, Annual meeting: *Kultur-, Naturhistorisk og Kunstfagligt Orienteringsmøde 2017*, Organisationen Danske Museer, Vejle, Denmark, 16 November 2017.

Rubina Raja, High-definition narratives in grand-narrative regions: The case of the Decapolis city of Gerasa, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 16 November 2017.

Søren M. Sindbæk, Ribe: A northern emporium in high definition, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 17 November 2017.

Thomas Birch, Towards the Roman standard: Modelling the silver economy in the Western Mediterranean 550-100 BCE, Conference: *High-Definition Narratives*, Aarhus University, Aarhus, Denmark, 17 November 2017.

Rubina Raja, The stuff of people: How and why things move around, Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE-8th century CE*, UrbNet, Aarhus University, Aarhus, Denmark, 20 November 2017.

Rubina Raja, Urban matters: From the detail to the map that matters, Lecture series: *The Dynamics of Urban Networks in the Near East, 1st century CE-8th century CE*, UrbNet, Aarhus University, Aarhus, Denmark, 20 November 2017.

Rubina Raja, Karavanebyen Palmyra, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 22 November 2017.

Michael Blömer, Relative dating, PhD course: *High-Definition Chronologies*, UrbNet, Aarhus University, Aarhus, Denmark, 23 November 2017.

Federica Sulas, The Obelisks of Axum and the queen of Sheba, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 29 November 2017.

Hanna Dahlström, A port on the Øresund - initiatives and dynamics in the early life of Copenhagen, Workshop: *How to Write a Successful Article*, Norwegian Institute in Rome, Rome, Italy, 29 November 2017.

Kirstine Haase, Den genfundne karré i Knuds by: Middelalderens Odense, Lecture Series: *Forsvundne Byer*, The Danish University Extension, Aarhus, Denmark, 6 December 2017.

Eva Mortensen, Artemistemplet i Ephesos, Lecture series: *Antikkens Syv Vidundere*, The Danish University Extension, Copenhagen, Denmark, 13 December 2017.

Kirstine Haase, An urban way of life: How to approach the study of networks, practices, and identities in medieval Odense, Denmark, PhD/Postdoc course: *Kolloquium, PhD/Post-Doc, der Klassischen Archäologie im Wintersemester 2017/2018*, Christian-Albrechts-Universität zu Kiel, Kiel, Germany, 14 December 2017.

Mahir Hrnjic, The flow of silver in the early medieval Baltic region: A high-definition approach in dealing with urban networks, PhD/Postdoc course: *Kolloquium, PhD/Post-Doc, der Klassischen Archäologie im Wintersemester 2017/2018*, Christian-Albrechts-Universität zu Kiel, Kiel, Germany, 14 December 2017.

Alex Peterson, Reuse of urban spaces: Mamluk settlement in the Northwest Quarter of Jerash, PhD/Postdoc course: *Kolloquium, PhD/Post-Doc, der Klassischen Archäologie im Wintersemester 2017/2018*, Christian-Albrechts-Universität zu Kiel, Kiel, Germany, 14 December 2017.

Kristine Thomsen, Urban life in Jerash: Development of mortar and plaster from a diachronic perspective, PhD/Postdoc course: *Kolloquium, PhD/Post-Doc, der Klassischen Archäologie im Wintersemester 2017/2018*, Christian-Albrechts-Universität zu Kiel, Kiel, Germany, 14 December 2017.



Mosaic floor of a Late Antique church (Photo Michael Blömer).

## Public Outreach

### Radio

DR P1 Morgen

3 January 2017

Palmyra and Syria's cultural heritage and the current situation

Rubina Raja

DR P1 Eftermiddag

19 January 2017

Zeus-statuen i Olympia

Kristine Thomsen

DR P1 Eftermiddag

23 January 2017

Artemistemplet i Ephesos og antikkens syv vidundere

Eva Mortensen

DR P1 Eftermiddag

24 February 2017

DNA og arkæologi

Søren M. Sindbæk

DR P1

18 April 2017

Spørg Danmarkshistorien

Søren M. Sindbæk

DR P1 Middagsradioavisen

13 June 2017

Den arkæologiske verdenselite er i Ribe

Søren M. Sindbæk

DR P1 Eftermiddag

4 July 2017

Et stykke egetræ afslører Harald Blåtands femte vikingeborg

Søren M. Sindbæk

DR P1 Eftermiddag

11 July 2017

Kulturarven i Mosul og Irak

Rubina Raja

DR P1 Eftermiddag

24 July 2017

Østafrikas tidligste kystby

Søren M. Sindbæk

Radio 2

16 August 2017

Microscop legt vroegste geschiedenis

Antwerpen en Lier bloot

Barbora Wouters

DR P1 Radioavisen

11 November 2017

Nye gamle runer i Ribe

Søren M. Sindbæk

### TV

Alphafilm

2 March 2017

Pilot project/film about the Danish-German Jerash Northwest Quarter Project

Rubina Raja

TV2 Nyhederne

15 March 2017

Arkæologer gør stort vikingefund: Kan være Gorm den Gamles betroede

Søren M. Sindbæk

SVT Nyheter

20 March 2017

Strid om vikingarnas spår i England

Søren M. Sindbæk

DR TV

16 April 2017

Historien om Danmark: Vikingetiden

Søren M. Sindbæk

TV2 Go' Morgen Danmark

24 April 2017

Arkæologi som reality

Søren M. Sindbæk

TV2 Fyn	Go' Morgen Danmark	ScienceNordic
14 May 2017	13 November 2017	20 February 2017
Odenses historie skal skrives om	Videnskaben holder fødselsdag: Det	New study reignites debate over Viking
Kirstine Haase	Kongelige Danske Videnskabernes	settlements in England
	Selskabs 275 års jubilæum	Søren M. Sindbæk
TV2 Fyn	Rubina Raja	
19 May 2017		Videnskab.dk
Knuds Odense: Vikingernes by	Expedition Unknown	21 February 2017
Kirstine Haase	27 December 2017	Nyt studie ripper op i strid om danske
	Viking secrets	vikinger i England
DR TV Avisen	Søren M. Sindbæk	Søren M. Sindbæk
13 June 2017		
Ny udgravning går i gang		The Iris: Behind the Scenes at the Getty
Søren M. Sindbæk		24 February 2017
	<b>Online media</b>	Funerary portraiture helps scholars
DR2 Dagen	Blue Shield Denmark	reconstruct the social history of ancient
13 June 2017	3 January 2017	Palmyra
Enestående udgravning i Ribe	Fokus på illegal handel	Rubina Raja
Søren M. Sindbæk	Rubina Raja	
		The Local
TV2 Lorry	Danmarkshistorien.dk	24 February 2017
3 July 2017	6 February 2017	Were Denmark's Vikings economic
Stort gennembrud: Vikingeborg er fra	Gadenavne i middelalderens byer	migrants to the UK?
Harald Blåtands tid	Bjørn Poulsen	Søren M. Sindbæk
Søren M. Sindbæk		
	Getty Research Institute	Videnskab.dk
DR TV Avisen	7 February 2017	24 February 2017
6 August 2017	Faces of ancient Palmyra	DNA-strid: Arkæologer og historikere har
Viking-kongres i Danmark	Rubina Raja	mistet patent på historieskrivningen
Søren M. Sindbæk		Søren M. Sindbæk
	Getty Research Institute	
TV2 Lorry	7 February 2017	Ancient Pages
12 August 2017	The Palmyra Portrait Project: Preserving	24 February 2017
Fund af skeletter gør København 100 år	cultural heritage in a time of conflict	Archaeologists and historians argue with
ældre	Rubina Raja	geneticists over controversial Viking DNA
Hanna Dahlström, Bjørn Poulsen and	3rd Dimension	study
Jesper Olsen	13 February 2017	Søren M. Sindbæk
	Public statues across time and cultures	
DK4	Rubina Raja	
11 September 2017		
Arkæologien rundt: Ribe 2017		
Søren M. Sindbæk		

RealClearScience 25 February 2017 Why did Danish Vikings move to England? Søren M. Sindbæk	Videnskab.dk 22 March 2017 Ny trend: Vikingerne bliver realitystjerner Søren M. Sindbæk	Forskning.no 30 March 2017 Mektig viking ble begravet med stor hemmelighet Søren M. Sindbæk	Dr.dk 16 April 2017 Den sidste vikingekonge Søren M. Sindbæk
News Network Archaeology 25 February 2017 Archaeologists and historians clash with geneticists over UK Viking study Søren M. Sindbæk	Videnskab.dk 24 March 2017 Magtfuld viking blev begravet med en kæmpe hemmelighed Søren M. Sindbæk	Ingeniøren 31 March 2017 Kvantespring inden for sensortechnologi er en gave til gravrøvere Søren M. Sindbæk	Point of View International 17 April 2017 Historien om Danmark: Så kom der vikinger Søren M. Sindbæk
The Telegraph 26 February 2017 Danish Vikings could have been economic migrants to Britain Søren M. Sindbæk	Carlsbergfondet 24 March 2017 Grant of millions for a unique excavation of the Forum of Julius Cæsar in Rome Rubina Raja	Byerne 3 April 2017 What is the purpose of coins? Medieval coin usage in urban and rural areas Olav E. Gundersen	Forzaitalia.dk 27 April 2017 Carlsbergfondet støtter stort projekt i Rom Rubina Raja
Politiken Viden og Tech 26 February 2017 Datidens immigranter: 20.000–35.000 danske vikinger bosatte sig i England Søren M. Sindbæk	Udenrigsministeriet 24 March 2017 Carlsbergfondet giver millionbevilling til enestående udgravning af Cæsars Forum i Rom Rubina Raja	Videnskab.dk 4 April 2017 Danske arkæologer skal udgrave Cæsars Forum i Rom Rubina Raja	Chemistry World 8 May 2017 Raiders of the lost pigments Luise Ø. Brandt
Mja.dk 17 March 2017 Arkæologer åbner unik ryttergrav fra vikingetiden Søren M. Sindbæk	Fyens.dk 29 March 2017 Mystisk vikingekammer kan gemme på stor hemmelighed Søren M. Sindbæk	DNRF 6 April 2017 Urbnet tilknyttet enestående udgravning af Cæsars Forum i Rom Rubina Raja	Koegenu.dk 1 June 2017 Følg arkæologerne på Vikingeborgen Søren M. Sindbæk
Carlsbergfondet 17 March 2017 Rubina Raja og Bjørn Nørgaard indtog Glyptoteket Rubina Raja	Aarhus University, Arts 29 March 2017 Dansk forskningshold med i unikt arkæologisk udgravningsprojekt Rubina Raja	Dr.dk 15 April 2017 Vikingeesperter: Kristendommens indførelse i Danmark var ren storpolitik Søren M. Sindbæk	Videnskab.dk 2 July 2017 Derfor endte verden med antikkens syv vidundere Eva Mortensen

Videnskab.dk 4 July 2017 Træplanke afslører, hvor gammel Blåtands borg er Søren M. Sindbæk	ScienceNordic 17 July 2017 Archaeologists finally know how old Denmark's fifth Viking fortress is Søren M. Sindbæk	Sjællandske Nyheder 9 August 2017 Vølvens spænde kaster nyt lys over Borgring Søren M. Sindbæk
The Local 4 July 2017 Denmark find proves 'Harald Bluetooth's fifth Viking fortress' Søren M. Sindbæk	Videnskab.dk 23 July 2017 Arkæologer udgraver Østafrikas tidligste kystby Federica Sulas	Sjællandske Nyheder 10 August 2017 Nyt fund: Var Harald Blåtands vøve på Borgring? Søren M. Sindbæk
ScienceDaily 5 July 2017 Breakthrough in dating Viking fortress Søren M. Sindbæk	Videnskab.dk 6 August 2017 110 vikingeforskere er på nippet til at afsløre store opdagelser Søren M. Sindbæk	Daily Mail 10 August 2017 Archaeologists use lasers to uncover a perfectly circular 1,000-Year-Old Viking ring fortress in Denmark: The first to be found in more than half a century Søren M. Sindbæk
Phys.org 5 July 2017 Breakthrough in dating Viking fortress Søren M. Sindbæk	International Business Times 8 August 2017 1,000-year-old massive, perfectly circular Viking fortress discovered in Denmark Søren M. Sindbæk	International Business Times 10 August 2017 Mosaics in 'Pompeii of the East' reveal moment of destruction that crushed a city 1,200 years ago Rubina Raja
Sci-News 7 July 2017 Borgring fortress discovery: Dendrochronological dating results Søren M. Sindbæk	Aarhus University 8 August 2017 Sølvspænde forbinder Borgring til Harald Blåtand Søren M. Sindbæk	Carlsbergfondet 11 August 2017 Forskning støttet af Carlsbergfondet afslører mosaikkens historie Rubina Raja
Publico.pt 10 July 2017 Portugueses começam a pescar bacalhau na Terra Nova depois de um engano Bjørn Poulsen	Videnskab.dk 8 August 2017 »Det var satans«: Dette smykke kan have tilhørt Blåtands trolkvinde Søren M. Sindbæk	Archaeology.org 11 August 2017 Archaeologists confirm Viking fortress Søren M. Sindbæk
Videnskab.dk 13 July 2017 Arkæologer: Byerne fortjener bedre behandling Rubina Raja and Søren M. Sindbæk	Aarhus University, International Jerash Excavation 9 August 2017 Archaeologists reveal the history of mosaics Rubina Raja	

The Telegraph 13 August 2017 Roman coins show evidence of Hannibal's defeat, scientists say Thomas Birch	Science 14 August 2017 This coin reveals when Rome became an empire Thomas Birch	Archaeology.org 15 August 2017 House of the Tesseræ: Mosaic production in ancient Jerash Rubina Raja
Mining.com 13 August 2017 Ancient coins show how empire shifted from Carthage to Rome Thomas Birch	The States Man 14 August 2017 Roman coins show how Hannibal's defeat led to rise of Rome Thomas Birch	Archaeology.org 15 August 2017 Early Islamic house unearthed in Jordan Rubina Raja
Videnskab.dk 13 August 2017 Jagten på det forsvundne Artemistempel i Ephesos Eva Mortensen	International Business Times 14 August 2017 2,200-year-old coins record Hannibal's defeat and the start of the Roman Empire Thomas Birch	Live Science 15 August 2017 Mosaic production in a diachronic perspective: New insights Rubina Raja
Ancient Origins 14 August 2017 Laser tech reveals 1,000-year-old Viking ring fortress in Denmark Søren M. Sindbæk	Business Standard 14 August 2017 Hannibal's defeat led to rise of Roman Empire: study Thomas Birch	Europa Press 15 August 2017 Un análisis revela que la derrota de Aníbal está 'escrita' en las monedas del Imperio Romano Thomas Birch
The Times 14 August 2017 Rome built on Spanish silver Thomas Birch	Daily Mail 14 August 2017 Roman Empire was fueled by a 'massive influx' of Spanish silver: Scientists discover mines in Iberia were captured and allowed Rome to become the superpower of its day Thomas Birch	Live Science 15 August 2017 Ancient earthquake turned mosaic workshop into time capsule Rubina Raja
Archaeology.org 14 August 2017 Silver coins signal Rome's Rise Thomas Birch	International Business Times 15 August 2017 House of the tesserae: Mosaic production in the early Islamic period Rubina Raja	BBC World Service 15 August 2017 The Newsroom Thomas Birch
The Guardian 14 August 2017 Analysis of Roman coins tells of Hannibal's defeat and Rome's rise Thomas Birch		Live Science 16 August 2017 Roman change: Ancient coins reveal rise of an empire Thomas Birch

De Morgen 16 August 2017 Antwerpen en Brussel een tot twee eeuwen ouder dan verwacht Barbora Wouters	Deredactie.be 17 August 2017 Antwerpen en Brussel één tot twee eeuwen ouder dan verwacht Barbora Wouters	Il Fatto Storico 21 August 2017 Confermata col LiDAR la fortezza vichinga di Borgring Søren M. Sindbæk
Het Laatste Nieuws 16 August 2017 Archeologen leggen vroegste geschiedenis van Antwerpen en Brussel bloot met de microscop Barbora Wouters	Metrotime 17 August 2017 Archeologen leggen vroegste geschiedenis van Antwerpen en Brussel bloot met de microscop Barbora Wouters	Videnskab.dk 22 August 2017 Udlandet opdager dansk vikingeborg Søren M. Sindbæk
Science 16 August 2017 Thousand-year-old Viking fortress reveals a technologically advanced society Søren M. Sindbæk	Galileu 18 August 2017 Fortaleza de mil anos mostra que Vikings tinham tecnologias avançadas Søren M. Sindbæk	Futura Sciences 22 August 2017 Une impressionnante forteresse Viking découverte au Danemark Søren M. Sindbæk
IFLScience.com 17 August 2017 Incredible Viking ring fortress discovered in Denmark Søren M. Sindbæk	History 18 August 2017 Interview 1,000-year-old stump of wood may hold the key to Viking fortress secrets Søren M. Sindbæk	Wikistrike 23 August 2017 Une impressionnante forteresse Viking découverte au Danemark Søren M. Sindbæk
Gazet van Antwerpen 17 August 2017 Toen Antwerpen zelf nog perking was. Sporen van beschaving teruggevonden uit de 5de eeuw Barbora Wouters	Videnskab.dk 20 August 2017 Zeus-statuen var 7. vidunder og et stærkt politisk billede Kristine Thomsen	Maestroviejo 24 August 2017 Researchers discover thousand-year-old circular Viking fortress in Denmark Søren M. Sindbæk
Bruzz.be 17 August 2017 Vroegste geschiedenis Brussel blootgelegd met microschoop2 Barbora Wouters	The Independent 21 August 2017 Borgring: 1000-year-old Viking fortress uncovered in Denmark Søren M. Sindbæk	Forbes.com 24 August 2017 Discovery of early Islamic tesserae sheds light on art and earthquakes Rubina Raja
		Fredzone 26 August 2017 Découverte historique, une forteresse Viking au Danemark Søren M. Sindbæk



<p>Sciencenordic.com 29 August 2017 Archaeologists: Cities deserve better treatment Rubina Raja and Søren M. Sindbæk</p>	<p>Ancient code 5 September 2017 Investigadores descubren fortaleza circular de Vikingos, con mil años de antigüedad, en Dinamarca Søren M. Sindbæk</p>	<p>Steemit 16 September 2017 El esqueleto enciende el debate sobre si las mujeres eran guerreros vikingos Søren M. Sindbæk</p>
<p>El Mundo 29 August 2017 Hallan en Dinamarca los restos de una fortaleza vikinga de hace 1.000 años Søren M. Sindbæk</p>	<p>Soha 5 September 2017 Lieu rang cuop bien Viking co phai la nhung ke hung hang, hieu chien? Søren M. Sindbæk</p>	<p>Kongehuset.dk 22 September 2017 Pressemeddelelse: Hendes Majestæt Dronningen besøger Rom Rubina Raja</p>
<p>Die Zeit 30 August 2017 Wikinger: Akkurate Grobmotoriker Søren M. Sindbæk</p>	<p>Second Nexus 7 September 2017 Ancient structure reveals Vikings were more technologically advanced than we thought Søren M. Sindbæk</p>	<p>LiveScience 29 September 2017 Viking fort reveals secrets of Danish king's elaborate military network Søren M. Sindbæk</p>
<p>Casopis-Sifra 31 August 2017 Byla nalezena 1000 let stará vikingská pevnost z doby krále Modrozuba. Svoji vyspělostí zcela mění pohled na schopnosti Vikingů Søren M. Sindbæk</p>	<p>Videnskab.dk 12 September 2017 Arkæologer om kvindeligt vikingekriger: Slå koldt vand i blodet! Søren M. Sindbæk</p>	<p>Historykon.pl 29 September 2017 Tajemnica piętego fortu wikingów Søren M. Sindbæk</p>
<p>La Nacion 31 August 2017 Encuentran en Dinamarca los restos de una fortaleza vikinga de hace 1000 años Søren M. Sindbæk</p>	<p>ScienceNews.org 13 September 2017 Skeleton ignites debate over whether women were viking warriors Søren M. Sindbæk</p>	<p>Frontera.info 30 September 2017 Revelan el propósito de las fortalezas del vikingo Søren M. Sindbæk</p>
<p>Imneuquen.com 1 September 2017 Encontraron una ruina vikinga de más de 1000 años Søren M. Sindbæk</p>	<p>Pour la Science 14 September 2017 Une nouvelle citadelle viking découverte Søren M. Sindbæk</p>	<p>Folkeuniversitetet.dk 9 October 2017 5 eksempler på datidens globalisering // Søren Michael Sindbæk Søren M. Sindbæk</p>
	<p>Ars Technica 14 September 2017 New evidence of Viking warrior women might not be what it seems Søren M. Sindbæk</p>	<p>Folkeuniversitetet.dk 9 October 2017 Om nogle år skriver vi byernes historie om Søren M. Sindbæk</p>

ScienceNordic 17 October 2017 This tiny ornament may have belonged to Harold Bluetooth's shaman Søren M. Sindbæk	Il Messaggero 26 October 2017 Roma, una Regina al Foro di Cesare: Margherita II di Danimarca accolta dalla sindaca Raggi Rubina Raja	Roma Daily News 26 October 2017 Una regina archaeologa per il Foro di Cesare, la Regina Margherita II di Danimarca Rubina Raja
Fiord.org 19 October 2017 Найден орнамент, часть украшения жрицы и чародейки Харольда Синезубого Søren M. Sindbæk	Comune Roma 26 October 2017 Margrethe II di Danimarca visita il Foro di Cesare. Nuovi scavi con fondi da Copenhagen Rubina Raja	Askanews.it 26 October 2017 Roma, Raggi accoglie Regina di Danimarca Margrethe II Rubina Raja
Carlsbergfondet 25 October 2017 H.M. Dronningen lancerer udgravning på Cæsars forum i Rom Rubina Raja	Kendte.dk 26 October 2017 Margrethe forlader regnvåde Danmark Rubina Raja	Giornalista Indipendente 26 October 2017 Arte - Cultura - Cronaca: Sua Maesta' La Regina di Danimarca Margrethe II e il Foro di Cesare Rubina Raja
Kongehuset.dk 25 October 2017 Program for besøg i Rom Rubina Raja	Roma Today 26 October 2017 La Regina di Danimarca visita il Foro di Cesare: finanziato un nuovo scavo Rubina Raja	Romait.it 26 October 2017 Roma: Rinasce Foro di Cesare, Danimarca finanzia nuova stagione scavi Rubina Raja
SCIENCEreport.dk 26 October 2017 Dronningen lancerer dansk udgravning i Rom Rubina Raja	Affaritaliani.it 26 October 2017 Raggi e la regina di Danimarca nel foro di Cesare Rubina Raja	Agenparl 26 October 2017 Roma: La sindaca Raggi accoglie la Regina di Danimarca Margrethe II per visita al Foro di Cesare/video Rubina Raja
Kongehuset.dk 26 October 2017 Udgravninger på Cæsars Forum i Rom Rubina Raja	TV2 News 26 October 2017 Opening of the Danish-Italian excavation project on Caesar's Forum in Rome Rubina Raja	LaPresse 26 October 2017 Roma: La sovrana di Danimarca in visita al Foro di Cesare Rubina Raja
Kongehuset 26 October 2017 H.M. Dronningen besøger Rom: Dag 1 Rubina Raja		

Virgilio 26 October 2017 Roma: Una Regina al Foro di Cesare: Margherita II di Danimarca accolta dalla sindaca Raggi Rubina Raja	Corriere TV 27 October 2017 La regina di Danimarca si addormenta durante la lunga presentazione Rubina Raja	DNRF 30 October 2017 DNRF head of center Rubina Raja presents prestigious excavation project in Rome to Her Majesty Queen Margrethe Rubina Raja
Kika Press 26 October 2017 Margherita II di Danimarca a Roma, una Regina al Foro di Cesare Rubina Raja	Carlsbergfondet 27 October 2017 H.M. Dronningen overrakte Carlsbergfondets pris og Stipendium Rubina Raja	DNRF 30 October 2017 UrbNet-centerleder Rubina Raja i internationalt samarbejde om digitalt læringsprojekt Rubina Raja
ANSA.it 26 October 2017 Raggi-Margrethe II, emergerà Foro Cesare Rubina Raja	Leggo 27 October 2017 La Regina salva il Foro di Cesare Rubina Raja	Arte Magazine 30 October 2017 Inaugurata la campagna di scavo del Foro di Cesare finanziata dalla birra danese Carlsberg Rubina Raja
Oltrepensiero News Press Agency 26 October 2017 La Regina Margrethe II inaugura a Roma il progetto italo-danese per i nuovi scavi archeological al Foro di Cesare Rubina Raja	Meridiana Notizie 27 October 2017 Margrethe II di Danimarca visita il Foro di Cesare: Nuovi scavi con fondi da Copenhagen Rubina Raja	Aarhus University, School of Culture and Society 1 November 2017 To millioner til at undersøge danske Cæsarreceptioner Rubina Raja
Virgilio 26 October 2017 Raggi-Margrethe II, emergerà Foro Cesare Rubina Raja	TNS 27 October 2017 Roma: Con investimento Danimarca riemergerà tutto Foro Cesare Rubina Raja	Ambasciata d'Italia Copenagen 3 November 2017 Her Majesty Queen Margrethe II launches excavation at Caesar's Forum in Rome Rubina Raja
Italia Reale 26 October 2017 La Regina Margherita di Danimarca a Roma Rubina Raja	Rome - THE IMPERIAL FORA: ARCHAEOLOGICAL NEWS and RELATED STUDIES 2010-17 29 October 2017 Roma archaeologia e restauro architettura: Roma, una Regina al Foro di Cesare: Margherita II di Danimarca accolta dalla sindaca Raggi Rubina Raja	Videnskab.dk 7 November 2017 Open Data: Fantastisk ide eller bureaukratisk mareridt? Rubina Raja
Repubblica tv 26 October 2017 Roma, 1,5 milioni per i nuovi scavi del Foro di Cesare Rubina Raja		

Observer	Politiken Kultur	Berlingske
8 November 2017	15 February 2017	16 April 2017
1,200-year-old mosaic studio reveals a 'snapshot' of ancient construction methods	The situation in Palmyra – the new Russian drone photos	DRs danmarkshistorie fortæller stadig fint, men det mangler arkæologiske fund og videnskabelig uenighed
Rubina Raja	Rubina Raja	Søren M. Sindbæk
DR Syd	Politiken Kultur	JydskeVestkysten
11 November 2017	16 February 2017	4 June 2017
Historisk udgravning har allerede afsløret unikke fund fra vikingetiden	Red verdenskulturarven før det er for sent	Et af Ribes helt store arkæologi-projekter er gået i gang
Søren M. Sindbæk	Rubina Raja	Søren M. Sindbæk
The Jordan Times	Aarhus Stiftstidende	Politiken Kultur
12 November 2017	21 February 2017	3 July 2017
Danish-German archaeological project in Jerash 'unlocks new path to understanding the city'	Følg en udgravning på antikmuseet	Træstump afslører Harald Blåtands femte vikingeborg
Alex Peterson	Rubina Raja	Søren M. Sindbæk
Videnskab.dk	Kristeligt Dagblad	JydskeVestkysten
18 December 2017	27 February 2017	5 August 2017
Studie: Alt jern fra bronzealderen kom fra det ydre rum	Danske vikinger var datidens immigranter	Sjældent vikingesmykke på kort visit i Ribe
Thomas Birch	Søren M. Sindbæk	Søren M. Sindbæk
<b>Press: Newspapers and magazines</b>	Jyllands-Posten	JydskeVestkysten
Jyllands-Posten	15 March 2017	5 August 2017
5 February 2017	En af rigets mægtigste mænd hentes nu op fra jorden	Verdens førende vikingekongres bliver holdt i Ribe
Moderne metoder revolutionerer arkæologien – og giver liv til et gammelt vikingehus i Aarhus	Søren M. Sindbæk	Søren M. Sindbæk
Søren M. Sindbæk and Jesper Olsen	Danske Banks Årsmagasin 2017	Billed-Bladet
Politiken Kultur	22 March 2017	6 August 2017
14 February 2017	Det eksklusive fællesskab	Dronning Margrethe smilede på helt særlig dag
Russisk drone viser ødelæggelsen af kulturarv i Palmyra	Rubina Raja	Søren M. Sindbæk
Rubina Raja	Kristeligt Dagblad	Ekstra Bladet
	30 March 2017	6 August 2017
	Danske forskere er med i unik udgravning	Ikke et ord om Kongen: Magrethe skyndte sig på toilettet
	Rubina Raja	Søren M. Sindbæk
	Jyllands-Posten	
	8 April 2017	
	Danske arkæologer bag udgravningen af Cæsars Forum i Rom	
	Rubina Raja	

Randers Amtsavis  
8 August 2017  
Forbløffende fund: Smykke kan tilhøre  
Blåtands vølv på Fyrkat  
Søren M. Sindbæk

Ugeavisen  
10 August 2017  
Forbløffende fund: Smykke kan tilhøre  
Blåtands vølv på Fyrkat  
Søren M. Sindbæk

Weekendavisen  
11 August 2017  
Nyt om den skandinaviske ekspansion  
Søren M. Sindbæk

Politiken  
12 August 2017  
Nu kan der sættes to streger under:  
Absalon grundlagde ikke København  
Hanna Dahlström, Bjørn Poulsen and  
Jesper Olsen

Politiken  
12 August 2017  
Han var københavner – og han døde længe  
før, Absalon kom til byen  
Hanna Dahlström, Bjørn Poulsen and  
Jesper Olsen

Kristeligt Dagblad  
28 August 2017  
København var en handelsby før Absalon  
Hanna Dahlström

Ekstra Bladet  
2 September 2017  
København holder 850 års fødselsdag:  
Derfor er det helt forkert  
Hanna Dahlström

Jyllands-Posten  
2 September 2017  
København fejrer 850 års fødselsdag –  
men byen er mindst 100 år ældre  
Bjørn Poulsen and Hanna Dahlström

Jyllands-Posten  
13 September 2017  
Arkæologer: Ikke sikkert at kvindelig  
viking var kriger  
Søren M. Sindbæk

Weekendavisen Ideer  
15 September 2017  
Krig og kulturarv  
Rubina Raja

Jyllands-Posten  
25 September 2017  
Kongeligt besøg ved udgravning  
Rubina Raja

Billed-Bladet  
26 October 2017  
VIDEO: Dronning Magrethe ankommet til  
Rom  
Rubina Raja

Billed-Bladet  
26 October 2017  
På eventyr i Rom  
Rubina Raja

Metroxpress  
27 October 2017  
Dronningen på besøg i Rom  
Rubina Raja

Berlingske  
4 November 2017  
På toppen af fortiden  
Rubina Raja

B.T.  
4 November 2017  
På toppen af fortiden  
Rubina Raja

JydskeVestkysten  
8 November 2017  
Mange ville på rundtur i Ribes  
vikingeutgravning  
Søren M. Sindbæk



Funerary stele from Emesa, Archaeological  
Museum, Damascus Inv. 3097.

## Publications 2015–2017

PR = peer-reviewed; CO = co-authored with another international research institution; OA = Open Access

### Monographs

Kristensen, H. K. & Poulsen, B. (2016). *Danmarks Byer i Middelalderen*. Aarhus: Aarhus University Press.

ISBN 978-87-7124-906-4

(PR)

Raja, R. & Sørensen, A. H. (2015a). *Harald Ingholt & Palmyra*. Aarhus: AU TRYK.

ISBN: 978-87-92829-31-3 (Danish)

[http://projects.au.dk/uploads/media/Raja\\_Hoejen\\_Soerensen\\_Harald\\_Ingholt\\_og\\_Palmyra\\_2015.pdf](http://projects.au.dk/uploads/media/Raja_Hoejen_Soerensen_Harald_Ingholt_og_Palmyra_2015.pdf)

(OA)

Raja, R. & Sørensen, A. H. (2015b). *Harald Ingholt & Palmyra*. Aarhus: AU TRYK.

ISBN: 978-87-92829-34-4 (English)

[http://projects.au.dk/uploads/media/Raja\\_Hoejen\\_Soerensen\\_Harald\\_Ingholt\\_and\\_Palmyra\\_2015\\_eng.pdf](http://projects.au.dk/uploads/media/Raja_Hoejen_Soerensen_Harald_Ingholt_and_Palmyra_2015_eng.pdf)

(OA)

Wynne-Jones, S. (2016). *A Material Culture: Consumption and Materiality on the Coast of Precolonial East Africa*. Oxford: Oxford University Press.

ISBN: 978-01-9875-931-7

(PR)

### Edited books

Blömer, M., Lichtenberger, A. & Raja, R. (eds.) (2015). *Religious Identities in the Levant from Alexander to Muhammed: Continuity and Change. Contextualizing the Sacred 4*. Turnhout: Brepols.

ISBN: 978-2-503-54445-8

(PR) (CO)

Kropp, A. & Raja, R. (eds.) (2016). *The World of Palmyra. Palmyrenske Studier 1, Scientia Danica, Series H, Humanistica 4:6*.

Copenhagen: The Royal Danish Academy of Sciences and Letters.

ISBN 978-87-7304-397-4

(PR) (CO)

Lichtenberger, A. & Raja, R. (eds.) (2017a). *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK.

ISBN: 978-87-999649-2-5 (English)

(CO)

Lichtenberger, A. & Raja, R. (eds.) (2017b). *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK.

ISBN: 978-87-999649-3-2 (Danish)

(CO)

Lichtenberger, A. & Raja, R. (eds.) (2017c). *The Diversity of Classical Archaeology. Studies in Classical Archaeology 1*. Turnhout: Brepols.

ISBN: 978-2-503-57493-6

(PR) (CO)

Mortensen, E. & Poulsen, B. (eds.) (2017). *Cityscapes and Monuments of Western Asia Minor: Memories and Identities*. Oxford: Oxbow.

ISBN: 978-1785708367

(PR)

Pedersen, A. & Sindbæk, S.M. (eds.) (2015). *Et Fælles Hav: Skagerrak og Kattegat i Vikingetiden*. København: National Museum of Denmark.

ISBN: 978-87-7602-324-9

Raja, R. (ed.) (2017a). *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK.

ISBN: 978-87-999649-1-8 (English)

Raja, R. (ed.) (2017b). *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK.

ISBN: 978-87-999649-0-1 (Danish)

Raja, R. (ed.) (2017c). *Contextualizing the Sacred in the Hellenistic and Roman Near East: Religious Identities in Local, Regional, and Imperial Settings*. Turnhout: Brepols.

ISBN: 978-2-503-56963-5

(PR)

Raja, R. & Rüpke, J. (eds.) (2015). *A Companion to the Archaeology of Religion in the Ancient World*. Chichester: West Sussex: John Wiley & Sons Inc.

ISBN: 978-1-4443-5000-5

(PR) (CO)

Raja, R. & Weiss, L. (eds.) (2015). *The Significance of Objects: Considerations on Agency and Context. Religion in the Roman Empire 3:2*. Tübingen: Mohr Siebeck.

ISSN: 2199-4463

(PR) (CO)

Raja, R. & Weiss, L. (eds.) (2016). *The Significance of Objects: Considerations on Agency and Context. Religion in the Roman Empire 3:2*. Tübingen: Mohr Siebeck.

ISSN: 2199-4463

(PR) (CO)

Saxkjær, S. G. & Mortensen, E. (eds.) (2017). *Antikkens 7 Vidundere*. Aarhus: Aarhus Universitetsforlag.

ISBN: 978-87-7124-881-4 (Hardback) / 978-1315691459 (eBook)

(PR) (CO)

Serrelli, G., Melis, R. T., French, C. & Sulas, F. (eds.) (2017). *Sa massaria: Ecologia storica dei sistemi di lavoro contadino in Sardegna*, 2 vols. Rome: Consiglio Nazionale delle Ricerche.

ISBN: 978-88-97317-33-3

(PR) (CO)

Sindbæk, S. M. (ed.) (2015). *Dragons of the Northern Seas: The Viking Age of Denmark*. Ribe: Museum of Southwest Jutland.

ISBN: 87-89827-53-8 (English); 87-89827-54-6 (Chinese)

Wynne-Jones, S. & Fleisher, J. (eds.) (2015). *Theory in Africa, Africa in Theory: Locating Meaning in Archaeology*. London: Routledge.

ISBN: 9781138860612

(PR) (CO)

Wynne-Jones, S. & LaViolette, A. (eds.) (2017). *The Swahili World*. London: Routledge.

ISBN: 978-1138913462 (Hardback); 978-1317430179 (eBook)

(PR) (CO)

## Book chapters

Bangsgaard, P., Lichtenberger, A. & Raja, R. (2017a). "Animal bones from the North-West Quarter", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 107–114.

ISBN: 978-87-999649-2-5

(CO)

Bangsgaard, P., Lichtenberger, A. & Raja, R. (2017b). "Dyreknoqler fra Nordvest-kvarteret", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 107–114.

ISBN: 978-87-999649-3-2

(CO)

Barfod, G. H. (2017a). "Recycling, reuse and reduce: Glass in ancient Gerasa", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 115–120.

ISBN: 978-87-999649-2-5

Barfod, G. H. (2017b). "Genbrug af glas i det antikke Gerasa", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 115–120.

ISBN: 978-87-999649-3-2

Birch, T. (2017a). "Abandoned or unused? Ultra-high carbon steel and cast iron lumps from Semlach/Eisner", in: Cech, B. (ed.), *Die Produktion von Ferrum Noricum am Hüttenberger Erzberg: Die Ergebnisse der interdisziplinären Forschungen auf der Fundstelle Semlach/Eisner in der Jahren 2006–2009 / The Production of Ferrum Noricum at the Hüttenberger Erzberg: The Results of Interdisciplinary Research at Semlach/Esiner between 2006 and 2009*. Austria Antiqua 6. Graz: Unipress Verlag, 131–150.

ISBN: 978-3-902666-50-5

(PR)



Birch, T. (2017b). "A Roman mining tool: The investigation and identification of an iron object", in: Cech, B. (ed.), Die Produktion von Ferrum Noricum am Hüttenberger Erzberg: Die Ergebnisse der interdisziplinären Forschungen auf der Fundstelle Semlach/Eisner in der Jahren 2006–2009 / The Production of Ferrum Noricum at the Hüttenberger Erzberg: The Results of Interdisciplinary Research at Semlach/Eisner between 2006 and 2009, Austria Antiqua 6. Graz: Unipress Verlag, 455–474.

ISBN: 978-3-902666-50-5

(PR)

Birch, T. (2017c). "Vitrified and ferruginous remains", in: Ferraby, R. (ed.), Thwing, East Yorkshire: Excavation and Survey of a Romano-British Rural Settlement. York: Yorkshire Archaeological Society, 203–220.

ISBN: 978-0993238376

(PR)

Blömer, M. (2015). "Der Kult des Iuppiter Dolichenus und die Frage nach Kontinuität", in: Picht, L., Schmidt, K., Schmitz, G. & Wiggering, L. (eds.), The Limits of Change: Was ist der Wert der beständigen Dinge? Berlin: Neofelis Verlag, 103–122.

ISBN: 987-3-95808-022-5 (softcover); 987-3-943414-87-5 (eBook)

(PR)

Blömer, M. (2017a). "Der Gott im Blätterkelch: Ein neues Relief vom Dülük Baba Tepesi", in: Winter, E. (ed.), Vom eisenzeitlichen Heiligtum zum christlichen Kloster: Neue Forschungen auf dem Dülük Baba Tepesi, Dolichener und Kommagenische Forschungen 9. Asia Minor Studien 84. Bonn: Dr. Rudolf Habelt GmbH, 87–99.

ISBN: 9783774940796

(PR)

Blömer, M. (2017b): "The cult of Iupiter Dolichenus in the East", in: Nagel, S., Quack, J. & Witschel, C. (eds.), Entangled and Worlds: Religious Confluences between East and West in the Roman Empire. The Cult of Isis, Mithras, and Jupiter Dolichenus. Orientalische Religionen in der Antike 22. Tübingen: Mohr Siebeck, 96–112.

ISBN: 978-3-16-154730-0

(PR)

Blömer, M. & Facella, M. (2017). "A new altar for the God Turmasgade from Dülük Baba Tepesi", in: Winter, E. (eds.), Vom eisenzeitlichen Heiligtum zum christlichen Kloster. Neue Forschungen auf dem Dülük Baba Tepesi, Dolichener und Kommagenische Forschungen 9. Asia Minor Studien 84. Bonn: Dr. Rudolf Habelt GmbH, 101–123.

ISBN: 9783774940796

(PR) (CO)

Blömer, M. & Nieswandt, H.-H. (2016). "Atargatis und Alexander der Große: Ikonographische Überlegungen zu einer Münze aus Manbij/Hierapolis", in: Nieswandt, H.-H. & Schwarzer, H. (eds.), "Man kann es sich nicht prächtig genug vorstellen": Festschrift für Dieter Salzmann zum 65. Geburtstag. Padberg: Scriptorium, 13–30.

ISBN: 978-3932610578

(PR) (CO)

Croix, S., Knudsen, M., Pentz, P., Pedersen, A., Sindbæk, S. M. & Sørensen, A. C. (2015). "Tales", in: Sindbæk, S. M. (ed.), Dragons of the Northern Seas: The Viking Age of Denmark. Ribe: Museum of Southwest Jutland, 35–99.

ISBN: 87-89827-53-8 (English); 87-89827-54-6 (Chinese)

- Egelund, L. & Pedersen, M. N. (2017a). "A day on the dig", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 21–26.  
ISBN: 978-87-999649-2-5
- Egelund, L. & Pedersen, M. N. (2017b). "En dag i felten", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 21–26.  
ISBN: 978-87-999649-3-2
- French, C., Sulas, F., Melis, R. T., Di Rita, F., Montis, F., Radhouse, D., Taylor, S. & Serreli, G. (2017). "Evoluzione del paesaggio e insediamento nel bacino del Rio Posada: Indagini geoarcheologiche", in: Serreli, G., Melis, R. T., French, C. & Sulas, F. (eds.) *Sa massaria: Ecologia storica dei sistemi di lavoro contadino in Sardegna 1*, Rome, 81–114.  
ISBN: 978-88-97317-33-3  
(PR) (CO)
- Gammeltoft, P., Jakobsen, J. G. G. & Sindbæk, S. M. (2015). "Vikingetidens bebyggelse omkring Kattegat og Skagerrak: Et forsøg på kortlægning", in: Pedersen, A. & Sindbæk, S. M. (eds.), *Et Fælles Hav: Skagerrak og Kattegat i Vikingetiden*. København: National Museum of Denmark, 6–23.  
ISBN: 978-87-7602-324-9
- Haase, K. (2017a). "Handelsboderne langs Overgade", in: Runge, M. & Hansen, J. (eds.) *Knuds Odense: Vikingernes By*, Odense: Forlaget Odense Bys Museer, 150–155.  
ISBN: 9788790267179
- Haase, K. (2017b). "Hvad baggården gemte", in: Runge, M. & Hansen, J. (eds.) *Knuds Odense: Vikingernes By*, Odense: Forlaget Odense Bys Museer, 156–163.  
ISBN: 9788790267179
- Haase, K. (2017c). "Byens netværk", in: Runge, M. & Hansen, J. (eds.) *Knuds Odense: Vikingernes By*, Odense: Forlaget Odense Bys Museer, 170–175.  
ISBN: 9788790267179
- Knudsen, M., Pedersen, A., Pentz, P., Sindbæk, S. M. & Sørensen, A. C. (2015). "Dragons of the northern seas: The Viking Age of Denmark", in: Sindbæk, S. M. (ed.), *Dragons of the Northern Seas: The Viking Age of Denmark*. Ribe: Museum of Southwest Jutland, 5–12.  
ISBN: 87-89827-53-8 (English); 87-89827-54-6 (Chinese)
- Knudsen, M. & Sindbæk, S. M. (2015). "Dragon's den: Artisans and crafts", in: Sindbæk, S. M. (ed.), *Dragons of the Northern Seas: The Viking Age of Denmark*. Ribe: Museum of Southwest Jutland, 25–30.  
ISBN: 87-89827-53-8 (English); 87-89827-54-6 (Chinese)
- Krag, S. (2016). "Females in group portraits in Palmyra", in: Kropp, A. & R. Raja (eds.), *The World of Palmyra. Palmyrenske Studier 1*, Scientia Danica, Series H, Humanistica 4:6. Copenhagen: The Royal Danish Academy of Sciences and Letters, 180–193.  
ISBN 978-87-7304-397-4  
(PR)

Krag, S. (2017a). "Women in Palmyrene rituals and religious practices", in Brøns, C. & Nosch, M. (eds.), *Textiles and Cult in the Ancient Mediterranean*. Ancient Textiles Series 31. Oxford: Oxbow, 230–239.

ISBN: 978-1785706721 (Hardback); 978-1785706738 (eBook)

(PR)

Krag, S. (2017b). "Kvinder i Palmyra", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 57–66.

ISBN: 978-87-999649-0-1

Krag, S. (2017c). "Women in Palmyra", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 57–66.

ISBN: 978-87-999649-1-8

Krag, S. (2017d). "Changing identities, changing positions: Jewellery in Palmyrene female portraits", in: Long, T. & Sørensen, A. H. (eds.), *Positions and Professions in Palmyra*. Palmyrenske Studier 2, Scientia Danica, Series H, Humanistica 4:9. Copenhagen: The Royal Danish Academy of Sciences and Letters, 36–51.

ISBN: 978-87-7304-404-9

(PR)

Kristiansen, S. M., Holdridge, G. & Simpson, I. A. (2017a). "Reading the book of nature in Jerash: The soil archives", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 53–58.

ISBN: 978-87-999649-2-5

(CO)

Kristiansen, S. M., Holdridge, G. & Simpson, I. A. (2017b). "Et kapitel om Jerash fra naturens store bog: Jordbunden som arkiv", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 53–58.

ISBN: 978-87-999649-3-2

(CO)

Kropp, A. & Raja, R. (2016). "The world of Palmyra in Copenhagen", in: Kropp, A. & R. Raja (eds.), *The World of Palmyra*. Palmyrenske Studier 1, Scientia Danica, Series H, Humanistica 4:6. Copenhagen: The Royal Danish Academy of Sciences and Letters, 7–16.

ISBN 978-87-7304-397-4

(PR) (CO)

LaViolette, A. & Wynne-Jones, S. (2017). "Swahili worlds", in: Wynne-Jones, S. & LaViolette, A. (eds.), *The Swahili World*, London: Routledge, 1–14.

ISBN: 978-1138913462 (Hardback); 978-1317430179 (eBook)

(PR) (CO)

Lichtenberger, A. & Raja, R. (2017a). "Urban archaeology and the understanding of the past: Antiochia on the Chrysorrhoeas, also called Gerasa", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 9–20.

ISBN: 978-87-999649-2-5

(CO)

Lichtenberger, A. & Raja, R. (2017b). "Urban arkæologi og et blik ind i fortiden: Antiochia-ved-Chrysorrhoeas-også-kaldet-Gerasa", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: SUN-TRYK, 9–20.

ISBN: 978-87-999649-3-2

(CO)

Lichtenberger, A. & Raja, R. (2017c). "Water management in the North-West Quarter of Gerasa/Jerash", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 121–130.

ISBN: 978-87-999649-2-5

(CO)

Lichtenberger, A. & Raja, R. (2017d). "Vandforvaltning i Nordvest-kvarteret i Jerash", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 121–130.

ISBN: 978-87-999649-3-2

(CO)

Lichtenberger, A. & Raja, R. (2017e). "Editors' preface", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From Urban Periphery*. Aarhus: AU TRYK, 3.

ISBN: 978-87-999649-2-5

(CO)

Lichtenberger, A. & Raja, R. (2017f). "Redaktørens forord", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 3.

ISBN: 978-87-999649-3-2

(CO)

Lichtenberger, A. & Raja, R. (2017g). "Introduction: The Diversity of Classical Archaeology", in: Lichtenberger, A. & Raja, R. (eds.), *The Diversity of Classical Archaeology, Studies in Classical Archaeology 1*, Turnhout: Brepols, 1–3.

ISBN: 978-2-503-57493-6

(PR) (CO)

Melis, R. T., French, C., Sulas, F., Montis, F. & Serreli, G. (2017). "Geoarcheologia e storia nel territorio di Las Plassas: risultati preliminari", in: Serreli, G., Melis, R. T., French, C. & Sulas, F. (eds.) *Sa massaria: Ecologia storica dei sistemi di lavoro contadino in Sardegna 1*, Rome: Consiglio Nazionale delle Ricerche, 116–144.

ISBN: 978-88-97317-33-3

(PR) (CO)

Mortensen, E. (2017a). "Archive archaeology: Rediscovering Jerash in the digital archives", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 27–32.

ISBN: 978-87-999649-2-5

Mortensen, E. (2017b). "Arkæologi i arkiverne: Den digitale genopdagelse af Jerash", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 27–32.

ISBN: 978-87-999649-3-2

Mortensen, E. (2017c). "Artemistemplet i Ephesos", in: Saxkjær, S. G. and Mortensen, E. (eds.), *Antikkens 7 Vidundere*. Aarhus: Aarhus Universitetsforlag, 189–216.

ISBN: 978-87-7124-881-4 (Hardback); 978-1315691459 (eBook)

(PR)

Mortensen, E. (2017d). "Narratives and shared memories of heroes in the Aphrodisian cityscape", in: Mortensen, E. & Poulsen, B. (eds.), *Cityscapes and Monuments of Western Asia Minor: Memories and Identities*, Oxford: Oxbow, 42–54.

ISBN: 978-1785708367

(PR)

Mortensen, E. & Poulsen, B. (2017). "Preface", in: Mortensen, E. & Poulsen, B. (eds.), *Cityscapes and Monuments of Western Asia Minor: Memories and Identities*, Oxford: Oxbow, x–xi.

ISBN: 978-1785708367

(PR)

Möller, H. (2017a). "Ceramics in context: Interpreting life through pottery", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 59–66.

ISBN: 978-87-999649-2-5

Möller, H. (2017b). "Keramik i kontekst: Fortolkning af liv gennem keramik", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 59–66.

ISBN: 978-87-999649-3-2

Möller, H. & Becker, J. (2016). "Keramik und Glas aus dem Areal der Friedhofskirche", in: Niewöhner, P. (ed.), *Die große Friedhofskirche von Milet*. Wien: Verlag der Österreichischen Akademie der Wissenschaften, 292–310.

ISBN: 978-3-7001-3910-2

(PR) (CO)

Olsen, J., Ascough, P., Lougheed, B. C. & Rasmussen, P. (2017). "Radiocarbon dating in estuarine environments", in: Weckström, K., Saunders, K., Gell, P. & Skilbeck, G. (eds.), *Developments in Paleoenvironmental Research: Applications of Paleoenvironmental Techniques in Estuarine Studies 20*, Dordrecht: Springer Netherlands, 141–170.

ISBN: 978-94-024-0988-8 (Hardback) / 978-94-024-0990-1 (eBook)

(PR) (CO)

Peterson, A. (2017a). "Medieval pottery from Jerash: The Middle Islamic settlement", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 67–74.

ISBN: 978-87-999649-2-5

Peterson, A. (2017b). "Middelalderkeramik fra Jerash: Den mellemislamske bosættelse", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 67–74.

ISBN: 978-87-999649-3-2

Poulsen, B. (2015). "The Church and monetization in early medieval Denmark, c. 1060–1160", in: Gasper, G. M. & Gullbek, S. H. (eds.), *Money and the Church in Medieval Europe, 1000–1200: Practice, Morality and Thought*. Farnham: Ashgate, 141–157.

ISBN: 978-1-4724-5681-6

(PR)

Raja, R. (2015a). "Staging 'private' religion in Roman 'public' Palmyra: The role of the religious dining tickets (banqueting tesseræ)", in: Ando, C. & Rüpke, J. (eds.), *Public and Private in Ancient Mediterranean Law and Religion*. Berlin: de Gruyter, 165–186.

ISBN: 978-3-11-037102-4 (hardcover); 978-3-11-036703-4 (eBook PDF); 978-3-11-039251-7 (ePUB)

(PR)

Raja, R. (2015b). "Palmyrene funerary portraits in context: Portrait habit between local traditions and imperial trends", in: Fejfer, J., Moltesen, M. & Rathje, A. (eds.), *Tradition: Transmission of Culture in the Ancient World*. Copenhagen: Museum Tusulanum Press, 329–361.

ISBN: 9788763542586

(PR)

Raja, R. (2015c). "Complex sanctuaries of the Roman period", in: Raja, R. & Rüpke, J. (eds.), *A Companion to the Archaeology of Religion in the Ancient World*. Chichester, West Sussex: John Wiley & Sons Inc., 307–319.

ISBN: 978-1-4443-5000-5

(PR)

Raja, R. (2015d). "Fra portrætforskning til dokumentation af Syriens kulturarv", in: Raja, R. & Sørensen, A. H. (eds.), *Harald Ingholt & Palmyra*. Aarhus: AU TRYK, 10–13.

ISBN: 978-87-92829-31-3

Raja, R. (2015e). "From studying portraits to documenting Syria's cultural heritage", in: Raja, R. & A.H. Sørensen (eds.), *Harald Ingholt & Palmyra*. Aarhus: AU TRYK, 10–13.

ISBN: 978-87-92829-34-4

Raja, R. (2015f). "Cultic dining and religious patterns in Palmyra: The case of the Palmyrene banqueting tesseræ", in: Faust, S., Seifert, M. & Ziemer, L. (eds.), *Festschrift für Inge Nielsen. Gateways 3, Hamburger Beiträge zur Archäologie und Kulturgeschichte des antiken Mittelmeerraumes*. Aachen: Shaker Verlag, 181–200.

ISBN: 987-3-8440-4165-1

(PR)

Raja, R. (2016a). "Editor's abstract", in: Kropp, A. & Raja, R. (eds.), *The World of Palmyra. Palmyrenske Studier 1, Scientia Danica, Series H, Humanistica 4:6*. Copenhagen: The Royal Danish Academy of Sciences and Letters, 1.

ISBN 978-87-7304-397-4

(PR)

Raja, R. (2016b). "En romersk skulpturgruppe: Laokoon", in: Nørskov, V. & Pentz, P. (eds.), *50 FUND: Højdepunkter i Arkæologien*. Aarhus: Aarhus Univeristy Press, 10–15.

ISBN 978-87-7124-928-6

(PR)

Raja, R. (2016c). "De makedonske kongers grave: Vergina", in: Nørskov, V. & Pentz, P. (eds.), *50 FUND: Højdepunkter i Arkæologien*. Aarhus: Aarhus Univeristy Press, 236–241.

ISBN 978-87-7124-928-6

(PR)

Raja, R. (2016d). "Jødernes fæstning: Masada", in: Nørskov, V. & Pentz, P. (eds.), *50 FUND: Højdepunkter i Arkæologien*. Aarhus: Aarhus Univeristy Press, 186–191.

ISBN 978-87-7124-928-6

(PR)

Raja, R. (2017a). "Nordic research on Palmyra: From the editor", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 7–10.

ISBN: 978-87-999649-1-8

Raja, R. (2017b). "Palmyra-forskningen i Norden: Redaktørens indledning", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 7–10.

ISBN: 978-87-999649-0-1

Raja, R. (2017c). "Palmyra: Pearl of the Desert", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 11–20.

ISBN: 978-87-999649-1-8

Raja, R. (2017d). "Palmyra: Ørkenens Perle", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 11–20.

ISBN: 978-87-999649-0-1

Raja, R. (2017e). "Danish pioneers at Palmyra: Historiographic aspects of Danish scholarship on Palmyra", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 21–30.

ISBN: 978-87-999649-1-8

Raja, R. (2017f). "Danske pionerer i Palmyra: Den danske Palmyra-forskning i et historigrafisk perspektiv", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 21–30.

ISBN: 978-87-999649-0-1

Raja, R. (2017g). "Priesthood in Palmyra: Public office or social status?" in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 77–86.

ISBN: 978-87-999649-1-8

Raja, R. (2017h). "Præster i Palmyra: Et embede eller en social status?" in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 77–86.

ISBN: 978-87-999649-0-1

Raja, R. (2017i). "Zeus Olympios, Hadrian and the Jews of Antiochia-on-the-Chrysorrhoeas-formerly-called-Gerasa", in: Minchin, E. & Wade, J. (eds.), *Festschrift for Graeme Clarke. Studies in Mediterranean Archaeology*, Uppsala: Astrom Editions, 171–185.

ISBN: 978-91-7081-219-4

(PR)

Raja, R. (2017j). "Powerful images of the deceased: Palmyrene funerary portrait culture between local, Greek and Roman representations", in: Boschung, D. & Queyrel, F. (eds.), *Bilder der Macht: Das griechische Porträt und seine Verwendung in der antiken Welt*. *Morphomata* 34. Paderborn: Wilhelm Fink, 319–348.

ISBN: 978-3-7705-6126

(PR)

Raja, R. (2017k). "Networking beyond death: Priests and their family networks in Palmyra explored through the funerary sculpture", in: Teigen, H. F. & Seland, E. H. (eds.), *Sinews of Empire: Networks in the Roman Near East and Beyond*. Oxford: Oxbow, 121–136.

ISBN: 978-1785705960 (Hardback); 978-1785705977 (eBook epub); 978-1785705991 (eBook PDF)

(PR)

Raja, R. (2017l). "To be or not to be depicted as a priest in Palmyra: A matter of representational spheres and societal values", in: Long, T. & Sørensen, A. H. (ed.), *Positions and Professions in Palmyra*. *Palmyrenske Studier* 2, *Scientia Danica, Series H, Humanistica*, 4:9. Copenhagen: The Royal Danish Academy of Sciences and Letters, 115–130.

ISBN: 978-87-7304-404-9

(PR)

Raja, R. (2017m). "Going individual: Roman-period portraiture in classical archaeology", in: Lichtenberger, A. & Raja, R. (eds.), *The Diversity of Classical Archaeology, Studies in Classical Archaeology 1*, Turnhout: Brepols, 271–286.

ISBN: 978-2-503-57493-6

(PR)

Raja, R. (2017n). "Contextualizing the sacred in the Hellenistic and Roman Near East: Religious identities in local, regional, and imperial settings – A quest for new lines of enquiry", in: Raja, R. (ed.) *Contextualizing the Sacred in the Hellenistic and Roman Near East: Religious Identities in Local, Regional, and Imperial Settings*, Turnhout: Brepols, 1–10.

ISBN: 978-2-503-56963-5

(PR)

Raja, R. (2017o). "You can leave your hat on: Priestly representations from Palmyra. Between visual genre, religious importance and social status", in: Gordon, R., Petridou, G. & Rüpke, J. (eds.), *Beyond Priesthood: Religious Entrepreneurs and Innovators in the Roman Empire*, Berlin: de Gruyter, 417–442.

ISBN: 978-3-11-044818-4

(PR)

Raja, R. (2017p). "Between fashion phenomena and status symbols: Contextualising the wardrobe of the so-called 'former priests' of Palmyra", in: Brøns, C. & Nosch, M. (eds.), *Textiles and Cult in the Ancient Mediterranean, Ancient Textiles Series 31*, Oxford: Oxbow, 209–229.

ISBN: 978-1785706721 (Hardback) / 978-1785706738 (eBook)

(PR)

Raja, R. & Rüpke, J. (2015). "Archaeology of religion, material religion and the ancient world", in: Raja, R. & Rüpke, J. (eds.), *A Companion to the Archaeology of Religion in the Ancient World*. Chichester, West Sussex: John Wiley & Sons Inc., 1–26.

ISBN: 978-1-4443-5000-5

(PR) (CO)

Ringsborg, S. (2017a). "Children's portraits from Palmyra", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 67–76.

ISBN: 978-87-999649-1-8

Ringsborg, S. (2017b). "Børneportrætter fra Palmyra", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 67–76.

ISBN: 978-87-999649-0-1

Saxkjær, S. G. & Mortensen, E. (2017). "Antikkens syv vidundere: En kilde til fascination igennem årtusinder", in: Saxkjær, S. G. & Mortensen, E. (eds.), *Antikkens 7 Vidundere*. Aarhus: Aarhus Universitetsforlag, 11–37.

ISBN: 978-87-7124-881-4 (Hardback); 978-1315691459 (eBook)

(PR) (CO)

Sindbæk, S. M. (2015a). "Northern emporia and maritime networks: Modelling past communication using archaeological network analysis", in: Preiser-Kapeller, J. & Daim, F. (eds.), *Harbours and Maritime Networks as Complex Adaptive Systems*. Mainz: Verlag des Römisch-Germanischen Zentralmuseums, 105–118.

ISBN: 978-3-88467-248-8

(PR)



Sindbæk, S. M. (2015b). "Steatite vessels and the Viking diaspora: Migrants, travellers, and cultural change in early medieval Britain and Ireland", in: Barrett, J. H. & Gibbon, S. J. (eds.), *Maritime Societies of the Viking Age and Medieval World*. Oxford: Oxbow Books, 198–218.

ISBN: 9781909662797

(PR)

Sindbæk, S. M. (2017a). "Urbanism and exchange in the North Atlantic/Baltic, 600–1000CE", in: Hodos, T. (ed.), *The Routledge Handbook of Archaeology and Globalization*. London and New York: Routledge, 553–565.

ISBN: 978-0415841306 (Hardback); 978-1315449005 (eBook)

(PR)

Sindbæk, S. M. (2017b). "A site of intersection: Staraya Ladoga, eastern silver, and long-distance communication networks in early medieval Europe", in: Callmer, J., Gustin, I. & Roslund, M. (eds.), *Identity Formation and Diversity in the Early Medieval Baltic and Beyond: Communicators and Communication*, Leiden: Brill, 76–90.

ISBN: 978-9004292178 (Hardback); 978-9004328471 (eBook)

(PR)

Stott, D. & Kristiansen, S. M. (2017a). "Mapping ancient Gerasa with remote sensing", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 41–46.

ISBN: 978-87-999649-2-5

Stott, D. & Kristiansen, S. M. (2017b). "Oldtidens Gerasa kortlagt fra luften", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 41–46.

ISBN: 978-87-999649-3-2

Sulas, F. (2017). "Verso un'ecologia storica del bacino del Rio Posada", in: Serreli, G., Melis, R. T., French, C. & Sulas, F. (eds.) *Sa massaria: Ecologia storica dei sistemi di lavoro contadino in Sardegna 1*, Rome: Consiglio Nazionale delle Ricerche, 23–80.

ISBN: 978-88-97317-33-3

(PR)

Sørensen, A. H. (2017a). "Palmyra's colourful past: Murals for the dead", in: Raja, R. (ed.), *Palmyra: Pearl of the Desert*. Aarhus: AU TRYK, 87–93.

ISBN: 978-87-999649-1-8

Sørensen, A. H. (2017b). "Palmyras farverige fortid: Vægmalier til de døde", in: Raja, R. (ed.), *Palmyra: Ørkenens Perle*. Aarhus: AU TRYK, 87–93.

ISBN: 978-87-999649-0-1

Thomsen, K. (2017a). "Gerasa: Mortar matters", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: From the Urban Periphery*. Aarhus: AU TRYK, 83–88.

ISBN: 978-87-999649-2-5

Thomsen, K. (2017b). "Mørtelstudier i Gerasa", in: Lichtenberger, A. & Raja, R. (eds.), *Gerasa/Jerash: Fra Den Urbane Periferi*. Aarhus: AU TRYK, 83–88.

ISBN: 978-87-999649-3-2

Thomsen, K. (2017c). "Zeusstatuen i Olympia", in: Saxkjær, S. G. & Mortensen, E. (eds.), *Antikkens 7 Vidundere*. Aarhus: Aarhus Universitetsforlag, 219–241.

ISBN: 978-87-7124-881-4 (Hardback); 978-1315691459 (eBook)

Wynne-Jones, S. (2015a). "Biographies of practice and the negotiation of Swahili at nineteenth century Vumba", in: Richard, F. G. (ed.), *Materializing Colonial Encounters: Archaeologies of African Experience*. New York: Springer, 155–176.

ISBN: 978-1-4939-2633-6

(PR)

Wynne-Jones, S. (2015b). "Problems with practice: Dynamic interpretation in African archaeology", in: Wynne-Jones, S. & Fleisher, J. (eds.), *Theory in Africa, Africa in Theory: Locating Meaning in Archaeology*. London: Routledge, 55–71.

ISBN: 9781138860612

(PR)

Wynne-Jones, S. & Fleisher, J. (2015), "Theory in Africa, Africa in Theory", in: Wynne-Jones, S. & J. Fleisher (eds.), *Theory in Africa, Africa in Theory: Locating Meaning in Archaeology*. London: Routledge, 3–18.

ISBN: 9781138860612

(PR) (CO)

Wynne-Jones, S. (2017a). "The social composition of Swahili towns", in: Wynne-Jones, S. & LaViolette, A. (eds.), *The Swahili World*. London: Routledge, 293–305.

ISBN: 978-1138913462

(PR)

Wynne-Jones, S. (2017b). "Kilwa Kisiwani and Songo Mnara", in: Wynne-Jones, S. & LaViolette, A. (eds.), *The Swahili World*. London: Routledge, 253–259.

ISBN: 978-1138913462

(PR)

## Journal articles

Ashby, S. P., Coutu, A. N. & Sindbæk, S. M. (2015). Urban networks and Arctic outlands: Craft specialists and reindeer antler in Viking towns. *European Journal of Archaeology* 18:4, 679–704.

DOI: 10.1179/1461957115Y.0000000003

(PR) (CO) (OA)

Barfod, G. H., Larsen, J. M., Lichtenberger, A. & Raja, R. (2015). Revealing text in a complexly rolled silver scroll from Jerash with computed tomography and advanced imaging software. *Nature Scientific Reports* 5, 17765.

DOI: 10.1038/srep17765

(PR) (CO) (OA)

Blömer, M. (2016). Stadtgrabung in Doliche. *Antike Welt* 2016:1, 5.

(PR)

Blömer, M., Çobanoğlu, D. & Winter, E. (2016). Doliche 2014. *Kazı Sonuçları Toplantısı* 37:1, 41–58.

<http://www.kulturvarliklari.gov.tr/Eklenti/45229,37kazı1.pdf?0>

(PR) (CO) (OA)

Blömer, M. (2017a). Antiochos I. von Kommagene und sein Grabmal auf dem Nemrud Dağı: Zu den Ergebnissen des International Nemrud Dağı Project. *Orientalistische Literaturzeitung* 112:2, 101–107.

DOI: 10.1515/olzg-2017-0034

(PR)

Blömer, M. (2017b): Revival or reinvention? Local cults and their iconographies in Roman Syria. *Religion in the Roman Empire* 3, 344–365.

DOI: 10.1628/219944617X15014860816601

(PR)

Blömer, M., Çobanoğlu, D. & Winter, E. (2017). Doliche 2015. Kazı Sonuçları Toplantısı 38:1, 47–64.

<http://www.kulturvarliklari.gov.tr/Eklenti/52616,38kazi1pdf.pdf?0>

(PR) (CO) (OA)

Christensen, J., Holm, N., Schultz, M. K. & Sindbæk, S. M. (2017). Den femte ringborg. *Skalk* 2017:2, 18–20.

(PR) (CO) (OA)

Çobanoğlu, D., Blömer, M. & Winter, E. (2016). Doliche ve Dülük Baba Tepesi. *Aktüel Arkeoloji* 50, 88–99.

(PR)

Crabtree, P., Reilly, E., Wouters, B., Devos, Y., Bellens, T. & Schryvers, A. (2017). Environmental evidence from early urban Antwerp: New data from archaeology, micromorphology, macrofauna and insect remains. *Quaternary International* 460, 108–123.

DOI: 10.1016/j.quaint.2017.08.059

(PR) (CO)

Croix, S., Sindbæk, S. M. & Søvso, M. (2017). Uddannelsesudgravning ved Rosen Allé, Ribe, 2014–2016. *Middelalder-Arkæologisk Nyhedsbrev* 91.

(PR) (CO)

Dahlström, H., Poulsen, B. & Olsen, J. (2017). Det ældste København. *Skalk* 2017:4, 10–16.

Ebsen, J. A., Trinderup, C. H., Brandt, L. Ø. & Gundlach, C. (2017). The potential of microCT scanning for 3D documentation and dissemination of decorated archaeological leather. *Archaeological Leather Group Newsletter* 46, 14–18.

(PR) (CO)

Fitton, T. & Wynne-Jones, S. (2017). Understanding the layout of early coastal settlement at Unguja Ukuu, Zanzibar. *Antiquity* 91:359, 1268–1284.

DOI: 10.15184/aqy.2017.141

(PR) (CO)

Fleisher, J., Lane, P., LaViolette, A., Horton, M., Pollard, E., Quintana Morales, E., Vernet, T., Christie, A. & Wynne-Jones, S. (2015). When did the Swahili become maritime? *American Anthropologist* 117, 100–115.

DOI: 10.1111/aman.12171

(PR) (CO) (OA)

Frei, K. M., Coutu, A. N., Smiarowski, K., Harrison, R., Madsen, C. K., Arneborg, J., Frei, R., Guðmundsson, G., Sindbæk, S. M., Woollett, J., Hartman, S., Hicks, M. & McGovern, T. H. (2015). Was it for walrus? Viking Age settlement and medieval walrus ivory trade in Iceland and Greenland. *World Archaeology* 47:3, 439–466.

DOI: 10.1080/00438243.2015.1025912

(PR) (CO) (OA)

French, C., Sulas, F. & Petrie, C. (2017). Expanding the research parameters of geoarchaeology: case studies from Aksum in Ethiopia and Haryana in India. *Archaeological and Anthropological Sciences* 9, 1613–1626.

DOI: 10.1007/s12520-014-0186-3

(PR) (CO)

Goodchild, H., Holm, N. & Sindbæk, S. M. (2017). Borgring: The discovery of a Viking Age ring fortress. *Antiquity* 91:358, 1027–1042.

DOI: 10.15184/aqy.2017.118

(PR) (CO)

Gordon, R., Lichtenberger, A. & Raja, R. (2017). A new inscribed amulet from Gerasa (Jerash). *Syria* 94, 297–306.

(PR) (CO)

Haensch, R., Lichtenberger, A. & Raja, R. (2016). Christen, Juden und Soldaten im Gerasa des 6. Jahrhunderts. *Chiron* 46, 177–204.

ISSN: 0069-3715

(PR) (CO)

Hawkes, J.D. & Wynne-Jones, S. (2015). India in Africa: Trade goods and connections of the late first millennium. *Afriques: Débats, éthodes et terrains d'histoire* 6.

<https://afriques.revues.org/1752>

(PR) (CO) (OA)

Holdridge, G., Kristiansen, S. M., Lichtenberger, A., Raja, R. & Simpson, I. A. (2017). City and wadi: Exploring the environs of Jerash. *Antiquity* 91:358, 1–6.

DOI: 10.15184/aqy.2017.123

(PR) (CO)

Horton, M., Fleisher, J. & Wynne-Jones, S. (2017). The Mosques of Songo Mnara in their urban landscape. *Journal of Islamic Archaeology* 4:2, 163–188.

DOI: 10.1558/jia.35272

(PR) (CO)

Kalaitzoglou, G., Lichtenberger, A. & Raja, R. (2017). The Danish-German Jerash North-West Quarter Project 2013: Preliminary Field Report. *Annual of the Department of Antiquities of Jordan* 58, 11–37.

(PR) (CO)

Krag, S. (2017). Familieportrætter fra Palmyra. *SFINX* 40:4, 20–15.

(PR)

Krag, S. & Raja, R. (2016). Representations of women and children in Palmyrene funerary loculus reliefs, loculus stelae and wall paintings. *Zeitschrift für Orient-Archäologie* 9, 134–178.

ISSN: 1868-9078

(PR)

Larsen, J. M., Lichtenberger, A., Raja, R. & Gordon, R. L. (2016). An Umayyad period magical amulet from a domestic context in Jerash, Jordan. *Syria: Archéologie, Art et Histoire* 93, 369–386.

<http://syria.revues.org/4656>

(PR) (CO) (OA)

Lichtenberger, A., Lindroos, A., Raja, R. & Heinemeier, J. (2015). Radiocarbon analysis of mortar from Roman and Byzantine water management installations in the Northwest Quarter of Jerash, Jordan. *Journal of Archaeological Science: Reports* 2, 114–127.

DOI: 10.1016/j.jasrep.2015.01.001

(PR) (CO) (OA)

Lichtenberger, A. & Raja, R. (2015a). An architectural block with altar-iconography from the North-west Quarter of Jerash. *Levant* 2:1, 112–130.

DOI: 10.1179/0075891415Z.00000000059

(PR) (CO) (OA)

Lichtenberger, A. & Raja, R. (2015b). New archaeological research in the Northwest Quarter of Jerash and its implications for the urban development of Roman Gerasa. *American Journal of Archaeology* 119:4, 483–500.

DOI: 10.3764/aja.119.4.0483

(PR) (CO) (OA)

Lichtenberger, A. & Raja, R. (2015c). Intentional cooking pot deposits in Late Roman Jerash (Northwest Quarter). *Syria: Archéologie, Art et Histoire* 92, 309–328.

ISSN: 0039-7946

(PR) (CO)

Lichtenberger, A. & Raja, R. (2015d). A hoard of Byzantine and Arab-Byzantine coins from the excavations at Jerash, 6. *Jerash 2014. Numismatic Chronicle* 175 (Coin Hoards 2015), 299–308.

ISSN: 02677504

(PR) (CO)

Lichtenberger, A. & Raja, R. (2016a). Jerash in the Middle Islamic period: Connecting texts and archaeology through new evidence from the Northwest Quarter. *Zeitschrift des Deutschen Palästina-Vereins* 132:1, 63–81.

[http://www.palaestina-verein.de/wp/wordpress/?page\\_id=1982&lang=en](http://www.palaestina-verein.de/wp/wordpress/?page_id=1982&lang=en)

(PR) (CO)

Lichtenberger, A. & Raja, R. (2016b). The Danish-German Northwest Quarter Project at Jarash: Results from the 2011–2013 seasons. *Studies in the History and Archaeology of Jordan XII: Transparent Borders* 12, 173–188.

(PR) (CO)

Lichtenberger, A. & Raja, R. (2016c). Jarash Northwest Quarter Project, in: Corbett, C. J., Keller, D. R., Porter, B. A. & Shelton, C. P., *Archaeology in Jordan, 2014 and 2015 Seasons*. *American Journal of Archaeology* 120:4, 631–672 (643).

DOI: 10.3764/aja.120.4.0631

(PR) (CO) (OA)

Lichtenberger, A. & Raja, R. (2017). Mosaicists at work: The organisation of mosaic production in Early Islamic Jerash. *Antiquity* 91:358, Cambridge, 998–1010.

DOI: 10.15184/aqy.2017.66

(PR) (CO)

Lichtenberger, A., Raja, R., Eger, C. Kalaitzoglou, G. & Sørensen, A. H. (2017). A newly excavated private house in Jerash: Reconsidering aspects of continuity and change in material culture from late Antiquity to the early Islamic period. *Antiquité Tardive* 24, 317–359.

DOI: 10.1484/J.AT.5.112632

(PR) (CO)

Lichtenberger, A., Raja, R. & Sørensen, A. H. (2017). The Danish–German Jarash Northwest Quarter Project 2013: Preliminary Registration Report. *Annual of the Department of Antiquities of Jordan* 58, 39–103.

(PR) (CO)

Lichterhan, P., Raja, R., Rieger, A. & Rüpke, J. (2017). Grouping together in lived ancient religion: Individual interacting and the formation of groups. *Religion in the Roman Empire* 3:1, 3–10.

DOI: 10.1628/219944617X14860387744140

(PR) (CO)

Prendergast, M. E., Buckley, M., Crowther, A., Frantz, L., Eager, H., Lebrasseur, O., Hutterer, R., Hulme–Beaman, A., Neer, W. V., Douka, K., Veall, M., Morales, E. M. Q., Schuenemann, V. J., Reiter, E., Allen, R., Dimopoulos, E. A., Helm, R. M., Shipton, C., Mwebi, O., Denys, C., Horton, M., Wynne–Jones, S., Fleisher, J., Radimilahy, C., Wright, H., Searle, J. B., Krause, J., Larson, G. & Boivin, N. L. (2017). Reconstructing Asian faunal introductions to eastern Africa from multi-proxy biomolecular and archaeological datasets. *PLoS One* 12:8, e0182565.

DOI: 10.1371/journal.pone.0182565 (Original); 10.1371/journal.pone.0190336 (Correction)

(PR) (CO)

Raja, R. (2016a). Becoming urban. *Norwegian Archaeological Review* 49:1, 76–78.

DOI: 10.1080/00293652.2016.1175503

(PR) (OA)

Raja, R. (2016b). Representations of priests in Palmyra: Methodological considerations on the meaning of representation of priesthood in the funerary sculpture from Roman period Palmyra. *Religion in the Roman Empire* 2:1, 125–146.

DOI: 10.1628/219944616X14537295637952

(PR)

Raja, R. (2016c) In and out of contexts: Explaining religious complexity through the banqueting tesserae from Palmyra. *Religion in the Roman Empire* 2:3, 340–371.

DOI: 10.1628/219944616X14770583541526

(PR)

Raja, R. & Rüpke, J. (2015). Appropriating religion: Methodological issues in testing the 'Lived Ancient Religion' approach. *Religion in the Roman Empire* 1, 11–19.

DOI: 10.1628/219944615X14234960199632

(PR) (CO)

Raja, R. & Sørensen, A. H. (2015). The "Beauty of Palmyra" and Qasr Abjad (Palmyra): New discoveries in the archive of Harald Ingholt. *Journal of Roman Archaeology* 28:1, 439–450.

DOI: 10.1017/S1047759415002585

(PR) (OA)

Raja, R. & Weiss, L. (2015). The role of objects: Creating meaning in situations. *Religion in the Roman Empire* 2, 137–147.

DOI: 10.1628/219944615X14296073073494

(PR) (CO)

Raja, R. & Weiss, L. (2016). The significance of objects: Considerations on agency and context. *Religion in the Roman Empire* 2:3, 297–306.

DOI: 10.1628/219944616X14770583541445

(PR) (CO)

Sindbæk, S. M. (2016). Crafting networks in Viking towns. *Medieval and Modern Matters* 4, 119–132.

DOI: 10.1484/J.MMM.5.109773

(PR)

Sindbæk, S. M. & Croix, S. (2016). Helhest og Himmelhund: Dyrebegravelse på Ribes ældste gravplads. *Skalk* 4, 3–9.

Sulas, F., Fleisher, J. & Wynne-Jones, S. (2016). Geoarchaeology of urban space in tropical island environments: Songo Mnara, Tanzania. *Journal of Archaeological Science* 77, 52–63.

DOI: 10.1016/j.jas.2016.06.002

(PR) (CO) (OA)

Søe, N. E., Odgaard, B. V., Hertz, E., Holst, M. K. & Kristiansen, S. M. (2017). Geomorphological settings of a sacred landscape: Iron Age post battle deposits of human remains at Alken Enge, Denmark. *Geoarchaeology* 32:5, 1–13.

DOI: 10.1002/gea.21622

(PR) (CO)

Søe, N. E., Odgaard, B. V., Nielsen, A. B., Olsen, J. & Kristiansen, S. M. (2017). Late Holocene landscape development around a Roman Iron Age mass grave, Alken Enge, Denmark. *Vegetation History and Archaeobotany* 26, 277–292.

DOI: 10.1007/s00334-016-0591-x

(PR) (CO)

Wouters, B., Devos, Y., Milek, K., Vrydaghs, L., Bartholomieux, B., Tys, D., Moolhuizen, C. & Asch, N. (2017). Medieval markets: A soil micromorphological and archaeobotanical study of the urban stratigraphy of Lier (Belgium). *Quaternary International* 460: 48–64.

DOI: 10.1016/j.quaint.2017.03.002

(PR) (CO)

Wouters, B., Devos, Y., Winter, N. D. & Reygel, P. (2017). Micromorfologisch onderzoek van de zwarte lagen te Tongeren (Vermeulenstraat). *Signa: Tijdschrift uitgegeven door het Comité voor de verspreiding van het onderzoek in de Gallo-Romeinse archeologie* 6, 153–158.

(PR) (CO)

Wouters, B., Devos, Y., Vrydaghs, L., Tys, D., Milek, K. & Bartholomieux, B. (2017). Les fouilles de la Grand' Place de Lierre: Une évaluation de la contribution de l'étude géo-archéologique à la compréhension des marchés médiévaux. *Archaeologia Mediaevalis* 40, 123.

(PR) (CO)

Wouters, B., Makarona, C., Nys, K. & Claeys, P. (2017). Characterization of archaeological metal remains in micromorphological thin sections using  $\mu$ XRF elemental mapping. *Geoarchaeology* 32, 311–318.

DOI: 10.1002/gea.21591

(PR) (CO)

Wynne-Jones, S. & Fleisher, J. (2016). The multiple territories of Swahili urban landscapes. *World Archaeology* 48, 1–14.

DOI: 10.1080/00438243.2016.1179128

(PR) (CO) (OA)

## Proceedings

Gianni, G. B., Gobbi, A., Petersen, N. M., Piazzzi, C. & Trefný, M. (2017). "Tarquinia and the north: Considerations on some archaeological evidence of the 9th–3rd century BC", in: Trefný, M. and B. Jennings (eds.), *Inter-Regional Contacts during the First Millennium B.C. Proceedings of the 19th Meeting of European Association of Archaeologists, held in Pilsen (5–9 September 2013)*, 46–91.

(PR) (CO)

Lichtenberger, A. & Raja, R. (2016). Living with and on the river-side: The example of Roman Antiochia-on-the-Chrysorroas-formerly-called-Gerasa, in: Madsen, J. K., Andersen, N. O. & Thuesen, I. (eds.), *Water of Life: Essays from a Symposium held on the Occasion of Peder Mortensen's 80th Birthday. Proceedings of the Danish Institute in Damascus 11*. Copenhagen: Orbis, 98–117.

ISBN: 9788799790821

(PR) (CO)

Wynne-Jones, S. & Fleisher, J. (2016). Coins and other currencies on the Swahili coast, in: Haselgrove, C. & Krmnicek, S. (eds.), *The Archaeology of Money: Proceedings of the workshop "Archaeology of Money", University of Tübingen, October 2013*. Leicester Archaeology Monograph 24. Leicester: School of Archaeology and Ancient History, 115–136.

DOI: 10.1146/annurev-anthro-092611-145716

(PR) (CO)

## Reports

Raja, R. (2016a). Illegal trade and export of cultural goods: The case of the Palmyrene funerary portraiture, in: Chahin, D. & Lindblom, I. (eds.), *Fighting the Illegal Looting of Syria's Cultural Heritage: Report from the Sofia Conference 16 September 2015. Initiatives to Stop Illicit Antiquities Trade Financing the Syrian Conflict: Awareness Rising*. Norwegian Institute for Cultural Heritage Research, Sofia, 11–12.

[http://www.niku.no/filestore/ENGLISH/bilder/Sofiareport\\_2016.pdf](http://www.niku.no/filestore/ENGLISH/bilder/Sofiareport_2016.pdf)



Raja, R. (2016b). The history and current situation of World Heritage sites in Syria: The case of Palmyra, in: Almqvist, K. & Belfrage, L. (eds.), *Cultural Heritage at Risk*. Stockholm: Axel and Margaret Ax:son Johnson Foundation, 27–47.

<http://www.axess.se/shop/Article.aspx?id=183>

Raja, R. (2017). A virtual market for illegal trade in cultural goods: Palmyra in Syria as an example, in: *TemaNord 533:2017, Illicit Trade in Cultural Artefacts*. Copenhagen: Nordic Council of Ministers, 31–33.

<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1095129&dswid=1445>

### Scientific Reviews

Blömer, M. (2016). Review of: Andrea U. De Giorgi, *Ancient Antioch: From the Seleucid Era to the Islamic Conquest* (Cambridge 2016), *Bryn Mawr Classical Review* 2016.12.34.

<http://bmcr.brynmawr.edu/2016/2016-12-34.html>

Raja, R. (2016). Review of: A. Sartre & M. Sartre, *Palmyre: Vérités et légendes* (Perrin 2016), *Bryn Mawr Classical Review* 2016.12.24.

Raja, R. (2017). Review of: Michaela Konrad, *Emesa zwischen Klientelreich und Provinz. Identität und Identitätswandel einer lokalen Fürstendynastie im Spiegel der archäologischen Quellen*. *Orient-Archäologie* 34 (Rahden 2014); Heike Lehman, *Baalbek in nachantiker Zeit. Untersuchungen zur Stadtbaugeschichte vom 5. bis zum 20. Jahrhundert*. *Orient-Archäologie* 35, Rahden: 2015, *Levant* 49:2, 3 pages.

Sindbæk, S.M. (2016). Review of: J. Kershaw, *Viking identities: Scandinavian jewellery in England* (Oxford 2013), *Medieval Archaeology* 59:1, 343–344.

Sindbæk, S. M. (2017). Review of: Patrick F. Wallace. *Viking Dublin: the Wood Quay Excavations*. 592 Pages; 550 Colour and b&w Illustrations (Newbridge 2016); 978-0-7165-3314-6 Hardback €70, *Antiquity* 91:357, 828–830.

### Conference abstracts

Blömer, M. & Raja, R. (2017). Shifting the paradigms: Research on the funerary portraiture of greater Roman Syria. Abstract from the conference: *Funerary Portraiture in Greater Roman Syria*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15–16 June 2017.

Kropp, A. & Raja, R. (2016). The world of Palmyra. Abstract from the conference: *The World of Palmyra*, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 16–18 December 2013.

(CO)

Lichtenberger, A. & Raja, R. (2016a). Biographies of cities and rivers: The case of the golden river at Gerasa in the Decapolis. Abstract from the conference: *Biographies of Place*, Aarhus University, Aarhus, Denmark, 18–20 January 2016.

(CO)

Lichtenberger, A. & Raja, R. (2016b). Byzantine and Umayyad Gerasa: Results and findings from the Danish-German Jerash Northwest Quarter Project. Abstract from the conference: *Conspicuous productions: Gerasa's Pottery Finds from Byzantine to Umayyad Times in Context*, Aarhus University, Aarhus, Denmark, 12 October 2016.

(CO)

Lichtenberger, A. & Raja, R. (2017a). New research in the Northwest Quarter of Jerash and its impact on Roman Gerasa. Abstract from the conference: Regional Networks: Technological Transfers? Production and Consumption Patterns in Roman Pottery of the Decapolis, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 1 March 2017.

(CO)

Lichtenberger, A. & Raja, R. (2017b). Archaeological research in Jerash and the Danish-German Northwest Quarter Project 2011–2016. Abstract from the conference: The Archaeology and History of Jerash: 110 Years of Excavations, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 2–3 March 2017.

(CO)

Lichtenberger, A. & Raja, R. (2017c). The so-called “curtain of death” in the Palmyrene funerary sculpture. Abstract from the conference: Revisiting the Religious Life of Palmyra, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 21–22 September 2017.

(CO)

Philippesen, B., Larsen, J. S., Skriver, C., Astrup, P. M., Borup, P., Olsen, J. & Mannino, M. (2017). From oysters to cockles at Hjarnø: Chronology and economy on a Mesolithic kitchenmidden site. Abstract from the conference: Radiocarbon and Diet, Aarhus University, Aarhus, Denmark, 20–23 June 2017.

(CO)

Raja, R. (2016). Middle Islamic Jerash: New evidence and perspectives. Abstract from the conference: Mamluk Pottery: Material Culture and History in the Middle Islamic Period. Aarhus University, Aarhus, Denmark, 13 June 2016.

Raja, R. (2017a). Funerary sculpture in Palmyra: The Palmyra Portrait. Abstract from the conference: 118th Annual Meeting of the Archaeological Institute of America, University of Toronto, Toronto, Canada, 5–8 January 2017.

Raja, R. (2017b). New archaeological research in Ancient Gerasa (Jerash): The Danish-German Northwest Quarter Project. Abstract from the conference: 118th Annual Meeting of the Archaeological Institute of America, University of Toronto, Toronto, Canada, 5–8 January 2017.

Raja, R. (2017c). Palmyrene priests: Positions or professions? Abstract from the conference: 118th Annual Meeting of the Archaeological Institute of America, University of Toronto, Toronto, Canada, 5–8 January 2017.

Raja, R. (2017d). Network Evolutions: Conference outline. Abstract from the conference: Network Evolutions, Aarhus University, Aarhus, Denmark, 18–20 January 2017.

Raja, R. (2017e). It stays in the family: Palmyrene priests and their iconography. Abstract from the conference: Representations of Women and Children in Roman-Period Palmyra, Aarhus University, Aarhus, Denmark, 6 February 2017.

Raja, R. (2017f). High-definition narratives in grand-narrative regions: The case of the Decapolis city Gerasa. Abstract from the conference: High-Definition Narratives, Aarhus University, Aarhus, Denmark, 15–17 November 2017.

Raja, R. (2017g). Production economy – questions and lines of enquiry: The case of Palmyra. Abstract from the conference: Production Economy: Part I, Aarhus University, Aarhus, Denmark, 5 October 2017.

Raja, R. (2017h). Public and funerary portraiture in Palmyra: Portrait habits at a crossroad. Abstract from the conference: Funerary Portraiture in Greater Roman Syria, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15–16 June 2017.

Raja, R. & Heyn, M. (2017). The function of attributes in Palmyrene portraiture. Abstract from the conference: 118th Annual Meeting of the Archaeological Institute of America, University of Toronto, Toronto, Canada, 5–8 January 2017.

(CO)

Raja, R. & Lichtenberger, A. (2017a). Roman-period portrait habit in the funerary sculpture of northern Jordan: Local and foreign influences and their implications. Abstract from the conference: Funerary Portraiture in Greater Roman Syria, The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark, 15–16 June 2017.

(CO)

Raja, R. & Lichtenberger, A. (2017b). Ceramics from the Northern Quarter in Jerash: Narratives and numbers. Abstract from the conference: Cilician Wine, African Plates, Italian Cooking, Aarhus University, Aarhus, Denmark, 12 October 2017.

(CO)

Raja, R. & Lichtenberger, A. (2017c). Outline. Abstract from the workshop: Specialist Workshop for the Danish–German Jerash Northwest Quarter Project, Aarhus University, Aarhus, Denmark, 11 October 2017.

(CO)

Raja, R. & Lichtenberger, A. (2017d). Ceramics in Context. Abstract from the workshop: Specialist Workshop for the Danish–German Jerash Northwest Quarter Project, Aarhus University, Aarhus, Denmark, 11 October 2017.

(CO)

Raja, R. & Lichtenberger, A. (2017e). The Danish–German Jerash Northwest Quarter Project. Abstract from the workshop: Specialist Workshop for the Danish–German Jerash Northwest Quarter Project, Aarhus University, Aarhus, Denmark, 11 October 2017.

(CO)

Raja, R. & Rüpke, J. (2016). Epochalisation and religious innovations in pre-Augustan and Augustan Rome. Abstract from the conference: Epochalisation and Religious Innovations in Pre-Augustan and Augustan Rome, Aarhus University, Aarhus, Denmark, 6 April 2016.

(CO)

Thomsen, K. (2016). Gerasa: Mortar. Abstract from the conference: ToRS–Saxo 4th Annual Seminar, Copenhagen, Denmark, 2 December 2016.

## Others

Brandt, L. Ø., Cappellini, E., Mannering, U. & Schmidt, A. L. (2016). Nye artsbestemmelser af skind fra jernalderen: Forhistoriske proteiner fra skindkapper fundet i danske moser. Nationalmuseets Arbejdsmark 2016, 234–247.

<https://www.danskmoent.dk/pdf/mmStempel.pdf>

(CO)

Christensen, J., Goodchild, H., Holm, N. & Sindbæk, S. M. (2016). Borgring: En nyopdaget vikingeborg ved Køge. Museum Sydøstdanmark Årbog 2015, 8–19.

(CO)

Kalaitzoglou, G., Lichtenberger, A. & Raja, R. (2016). Ausgrabungen im Nordwestviertel von Gerasa (Jordanien). Jahresbericht des Instituts für Archäologische Wissenschaften für das Akademische Jahr 2014–2015, 89–94.

[http://www.ruhr-uni-bochum.de/archaeologie/mam/content/jahresbericht\\_2014\\_15.pdf](http://www.ruhr-uni-bochum.de/archaeologie/mam/content/jahresbericht_2014_15.pdf)

(CO)

Kalaitzoglou, G., Lichtenberger, A. & Raja, R. (2017). Ausgrabungen im Nordwestviertel von Gerasa (Jordanien). Jahresbericht des Instituts für Archäologische Wissenschaften für das Akademische Jahr 2015–2016, 85–90.

[http://www.ruhr-uni-bochum.de/archaeologie/mam/content/jahresbericht\\_2015\\_16.pdf](http://www.ruhr-uni-bochum.de/archaeologie/mam/content/jahresbericht_2015_16.pdf)

(CO)

Raja, R. (2016). Danske pionerer i Palmyra: Den danske Palmyra-forskning i et historiografisk perspektiv. Carlsbergfondets Årsskrift 2016: 140 års jubilæums årsskrift, 56–63.

<http://online.fliphtml5.com/bbdz/lwil/>

Raja, R. (2017). Open Data: UrbNet's challenges and possibilities. The Danish National Research Foundation, Open Access to Data: It's Not That Simple, Copenhagen, 12–13.

<http://dg.dk/wp-content/uploads/2017/11/Open-Access-to-Data-%E2%80%93-It%E2%80%99s-not-that-Simple.compressed.pdf>

Rasmussen, C. & Barfod, G. H. (2016). Nyt renrum ved Aarhus Universitet. Laboranten 60:6, 8–11.

<http://www.e-pages.dk/hk/1817/html5/>

(CO)

Ulriksen, J., Christensen, J., Holm, N., Schultz, M. K. & Sindbæk, S. M. (2017). Borgring Sæson 1: Vold, Brand og Ødelæggelse. Museum Sydøstdanmark, Årbog 2016, 10–21.

(CO)

Von Rummel, P., Wulf-Rheidt, U., Ardeleanu, S., Beck, D. M., Chaouali, M., Goischke, J., Möller, H. & Scheduling, P. (2016). Chintou, Tunesien: Die Arbeiten der Jahre 2014 und 2015. e-Forschungsberichte des Deutschen Archäologischen Instituts 2/2016, 99–109.

<https://www.dainst.org/documents/10180/2208100/eDAI-F2016-2.pdf/3dfb8236-a6e6-4b3b-9311-3a95a0ec287d>

(CO)

## Unpublished

Wouters, B. & Devos, Y. (2017). Micromorphological study of the site of 'Colaertplein', Ieper (YpreS). Unpublished report, 84 p.

Wouters, B. & Milek, K. (2017). Soil micromorphology report of two cores from the settlement area at Hedeby, Germany. Unpublished report, 108 p.



*UrbNet staff at the annual UrbNet retreat, January 2018, Rome, Italy (Photo: UrbNet).*



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**Back cover:** A selection of ceramic beads found in Ribe excavation by the *Northern Emporium* project (Photo: Museum of Southwest Jutland).

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