

# UrbNet Highlights 2021



## Vision

*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.

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

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

## New Tools for Archaeological Investigations



The *Northern Emporium* project applied a 'super-sampling' methodology where samples were collected at an unprecedented small scale. With this statistically verified sampling density, the project is now able to recommend the best-suited sampling scheme for future studies. With this, it is possible to cover both the variation in geochemistry, post-deposition processes and use of domestic space to understand archaeological indoor settings.

Trant, P. et al. 2021. Sampling density and spatial analysis: A geochemical study of a Viking-age house in Ribe, Denmark. *Journal of Archaeological and Anthropological Sciences*, 13: 21. <https://doi.org/10.1007/s12520-020-01243-7>

## Major Grants



Associate Professor Tom Brughmans was awarded two major grants in 2021: *MINERVA: Understanding the Centuries-Long Functioning of the Roman Economy* (The Independent Research Fund Denmark) and *The Past Social Networks Project: The First Open Online Repository for Network Data of Ancient Social Relationship* (Carlsberg Foundation Young Researcher Fellowship).

## Søren M. Sindbæk Appointed Professor of Medieval Archaeology



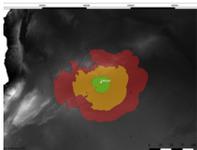
UrbNet Deputy Director Søren M. Sindbæk was appointed full professor in August 2021 at the Department of Archaeology and Heritage Studies, School of Culture and Society, Aarhus University. Søren M. Sindbæk's work has brought to the scholarly world new insights into urbanism in the medieval period in Northern Europe, and he is an internationally acclaimed leading expert on the Viking Age and its wide range of networks.

## Urban Sustainability in Roman Palmyra: How Counting the Dead Helps Investigate Past Societies' Resilience

The project *Circular Economy and Urban Sustainability in Antiquity* published four articles that highlight how high-definition archaeology in an urban context can be practiced through the use of archival sources, archaeological material and new technologies and applications, including the first full overview of all the data collected in the *Palmyra Portrait Project*.

Raja, R., Bobou, O. and Romanowska, I. 2021. Three hundred years of Palmyrene history: Unlocking archaeological data for studying past societal transformations. *PLoS ONE*, 16.11: e0256081. <https://doi.org/10.1371/journal.pone.0256081>

## Sustainability and Resilience



The collective research project *Circular Economy and Urban Sustainability in Antiquity* significantly narrowed down the estimation of the carrying capacity of Palmyra's hinterland, based on movement across the Palmyrene hinterland, existing data on local agriculture and studies of how changes in climate over time, specifically rainfall, would have affected the hinterland's carrying capacity.

## Statistics

Conferences and workshops: 15  
Invited talks: 89  
PhD defences and pre-defences: 5

PhD courses: 5  
Press and media appearances: 97  
Publications: 111

## The Archaeology of Seasonality



Seasonality is a pivotal topic when studying the ways in which past societies organised themselves across the year. The volume *The Seasonality of Archaeology* is the first to tackle wide-ranging aspects of seasonality based on archaeological evidence stemming from the discipline of Classical Archaeology.

Lichtenberger, A. & Raja, R. (eds.) (2021). *The Archaeology of Seasonality*, Studies in Classical Archaeology 11, Turnhout: Brepols.

## Award-Winning Paper Reveals Urban Amulet Production Using 3D Image Reconstruction



The *Northern Emporium* team has reinterpreted the content and production of Viking-age imagery based on new finds from urban workshops excavated in Ribe. Using 3D digital image reconstruction, the team was able to recreate the iconography of e.g. pendant moulds, and by studying the different moulds together in the contextualised setting of the workshop where they were found, the images can be understood in a completely new way. The new interpretation offer insights into religious rituals in the Viking Age.

Deckers, P., Croix, S. and Sindbæk, S. M. 2021. Assembling the full cast: Ritual performance, gender transgression and iconographic innovation in Viking-age Ribe. *Journal of Medieval Archaeology*, 65.1: 30-65. [10.1080/00766097.2021.1923893](https://doi.org/10.1080/00766097.2021.1923893)

## The Urban Evolution of Viking-Age Metalworking



A new study published in the *Journal of Archaeological and Anthropological Sciences* has altered our understanding of the evolution of metalwork expertise and craftsmanship developed by Viking craftspeople in Denmark in the 8th and 9th centuries. The study revealed a series of rapid technological advances at the beginning of the Viking Age, as craftspeople were exposed to new skills.

Orfanou, V. et al. 2021. On diverse arts: Crucible metallurgy and the polymetallic cycle at Scandinavia's earliest Viking town, Ribe (8th-9th c. CE), Denmark. *Archaeological and Anthropological Sciences*, 13: 81. <https://doi.org/10.1007/s12520-021-01308-1>