

# EAA

# 2021 Kiel, 6-11 Sept.

## Widening Horizons

## Virtual Meeting



EAA  
2021 Kiel, 6-11 Sept.  
Widening Horizons

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# 27th EAA Annual Meeting (Kiel Virtual, 2021)

## ABSTRACT BOOK

### 27th EAA Annual Meeting (Kiel Virtual, 2021) - Abstract Book

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cio-cultural phenomenon that implies social relations and identifies a given community. Style is a way of visual communication and combines the decoration, form and technology of the vessel. However, at each stage of its formation, the limitation is the individual decision and creativity of the creator as well as the existing, unconscious cultural framework or tradition.

Ceramics, as one of the manifestations of changes taking place in local communities and the resulting need to manifest one's group identity (group identity is not identified with ethnicity by us), allows for capturing various models of expressing it. The analysis of selected ceramics from strongholds located in the peripheral zone in relation to the centre of the Piast state shows that such an effect may be: adapting new cultural patterns and adapting to a new situation, or rejecting all innovations and changes, or acquiring only selected details while maintaining traditional.

In the further research perspective, the method of combining landscape studies with archaeometric studies of ceramics will be used as basic data for formulating knowledge about the processes influencing the group identification of the local communities.

## 18 INFRASTRUCTURES FOR CAPTURING, INTERPRETING AND VISUALISING TEXTS FOR ARCHAEOLOGICAL ANALYSIS: THE EXAMPLE OF THE RURAL-CY PROJECT

**Abstract author(s):** Paraskeva, Charalampos - Hadjittofi, Petroula - Rizopoulou-Egoumenidou, Euphrosyne - Vionis, Athanasios (Archaeological Research Unit, University of Cyprus)

**Abstract format:** Oral

Following the Ottoman conquest of 1571, the Christian Orthodox Church of Cyprus developed into one of the main political, economic and social actors on the island. In order to consolidate and expand its power, the Church undertook various agriculture-oriented income generating activities and became involved in wide economic networks spanning the island and beyond. Those activities are documented in a number of invaluable textual sources, including monastic property lists, which consist the focal point of the RURAL-CY (Rural Economy and Society in Early Modern Cyprus) project. Specifically, the project aims to explore the dynamics, strategies and patterns of rural-based economic activities by fully digitising, systematically recording and statistically-spatially analysing the Grand Manorial Codex, an unpublished document of 1188 pages dating to the late 18th century AD, which records in detail the movable and immovable property of 213 ecclesiastical institutions (churches and monasteries with glebes), located mainly in rural areas across Cyprus. In order to fulfil the above objectives, a novel archaeological information recording system has been developed with a view to capture textual data and their interpretations in a manner that renders them quantifiable and meaningful. The system consists of a fully normalised MySQL database and a custom-made graphical user interface developed in Microsoft Access 365 that allows data input, management, querying, filtering and output. As will be demonstrated the system allows the user to construct in-depth vocabularies associating specific words with abstract terms, enrich vocabularies with multimedia and bibliography, produce and record a logical tree-form topology of information, transcribe, translate, and automatically transliterate the source text; and break down the noetic structure of the Codex's contents, whilst retaining and constructing further logical relationships and assigning certainty values to each recorded data unit to allow statistical metanalysis using fuzzy statistics and spatial analysis using GIS software after data collection/consolidation.

## 19 ARCHIVAL STUDIES AND ACTUALIZATION OF THE ARCHAEOLOGICAL HERITAGE OF THE TAMAN EXPEDITION (1929-1932)

**Abstract author(s):** Zastrozhnova, Evgenia (Archive of Russian Academy of Sciences) - Medvedeva, Maria (Institute of History of Material Culture of RAS)

**Abstract format:** Oral

1930s became a very difficult period in the history of Russian archaeological science. At that time, the whole country was under the pressure of political repression and ideology. The results of many archaeological investigations of these difficult years still remain unknown and unpublished, and their memory has been preserved only in museum and archival collections. Actualization of their scientific heritage is one of the most important tasks of modern science. The study of the Taman expedition heritage provides us with an example of when archival documents became almost the only source of information about the work of the largest archaeological expedition. It was organized by the State Academy for the History of Material Culture (Leningrad, Russia). Since 1929, the expedition members have carried out large-scale studies of archaeological sites of different chronological periods on the Taman Peninsula (southern Russia). They were engaged in the identification and fixation of archaeological objects in this region, made a map of them, conducted small excavations and monitoring the state of already known monuments. As a result, important and significant scientific material was accumulated from antiquity to the Middle Ages. During the organization and work of the expedition, there was a clash of interests of several scientists and scientific organizations. The Soviet power used these circumstances, the story ended with the arrest and death of the main initiators of the expedition and the scientific leader of the expedition. The results of the fieldwork were never fully published. However, the scientific heritage of the Taman expedition has been preserved in various archives and museums of St. Petersburg, Moscow and Taman. Thanks to the support of the Russian Foundation for Basic Research, it became possible to collect all the materials, systematize and publish them.

The study was conducted with the financial support of the RFBR grant 20-09-00180.

## A. DENTAL PHENOTYPIC SIMILARITIES IN THE CHALCOLITHIC-BRONZE AGE HUMAN POPULATIONS FROM NORTH-EASTERN ROMANIA: A STATISTICAL MODELLING OF THE SECOND MOLAR MORPHOLOGY

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**Abstract format:** Poster

The dental morphology variations are often used to answer research questions related to archaeology and paleoanthropology. The teeth are generally well preserved in archaeological sites, even when the preservation of associated skeleton is poor. Furthermore, the tooth form is highly heritable and evolutionarily conservative, representing an excellent marker for testing various hypotheses on human history.

The dental morphology is approached in our study aiming to contribute at the understanding of the relationships between prehistoric human societies in north-eastern Romania. Upper and lower second molars (n=100) from several Chalcolithic and Bronze Age archaeological sites were used as phenotype marker. The study consists in the analysis of the size and shape of the second molar and of the covariation between them by techniques of geometric morphometrics. The quantitative data were collected using a set of landmarks located on the dental occlusal surface, at groove intersections, and a set of semilandmarks traced on the periphery of the same surface.

Results of this study reveal an important inter- and intragroup variability derived from dental morphology. The discriminant function of the upper second molar (M2) is mainly determined by the mesiodistal direction and the lingual cusps, while in the lower second molar (M2) the variability of the protoconid and the entoconid determines the characteristic phenotypes of the Chalcolithic and Bronze Age populations. Partial least squares (PLS) indicates that the upper and lower second molar are weakly covariate in both Chalcolithic and Bronze Age, according to the smaller RV coefficient (< 0.4).

This study provides evidence that may be used to infer interactions between different biological human groups correlated with historical events.

This work was supported by a research grant made with financial support from the Recurring Donor Fund, available to the Romanian Academy and managed by the “PATRIMONIU” Foundation GAR-UM-2019-II-2.1-16.

## B. RESEARCH OF PREHISTORIC POTTERY TRADITIONS - THE POTENTIAL AND PROBLEMS OF A HOLISTIC APPROACH

**Abstract author(s):** Kudelic, Andreja (Institute of Archaeology Zagreb)

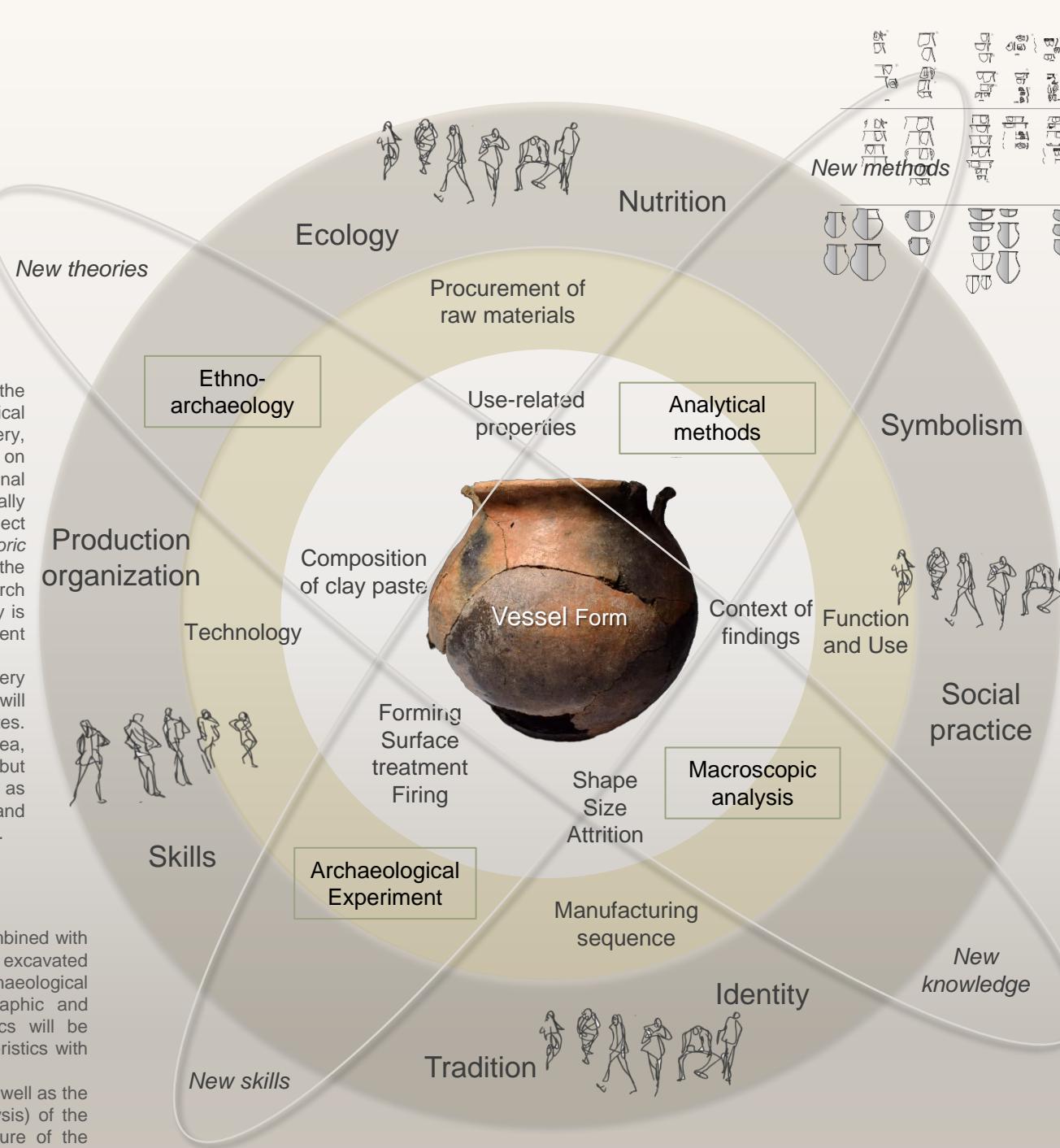
**Abstract format:** Poster

The tradition of studying archaeological ceramics on the territory of Croatia is deeply rooted in the culture-historical approach, especially when it comes to prehistoric pottery, which represents most of the archaeological record on prehistoric societies. Furthermore, our knowledge about prehistoric, especially Bronze Age communities in the area has been stagnating for decades. However, the amount of excavated archaeological sites and pottery as well as publications are greater than ever before.

The paper will present the project and methodological concept according to which over the next five years it is planned to conduct extended research on Bronze Age (2400-800 BC) pottery traditions on the territory of Croatia. A large-scale and well-designed systematic archaeometry research programme will be combined with macroscopic physical forms of examination of already excavated ceramic material. The study of pottery throughout its lifecycle from raw material selection, different stages of production, to distribution and use, and final discard, will provide valuable research contributions, but it also represents a huge data set. Therefore, the methodological challenges, as well as the challenges arising from the nature of the processed material, will be presented too. Accordingly, interdisciplinary (mis)understanding, the correlation of different data sets, quantification methods, and digitalization of such data currently present the biggest challenges. In that sense, awareness of the advantages but also limitations of analytical methods and a well-formed theoretical framework, research questions, and hypotheses are key parameters of an optimal methodological approach.

# Research of prehistoric pottery traditions - the potential and problems of a holistic approach

Andreja Kudelić, Institute of archaeology, Zagreb, Croatia



## INTRODUCTION

The tradition of studying archaeological ceramics on the territory of Croatia is deeply rooted in the culture-historical approach, especially when it comes to prehistoric pottery, which represents most of the archaeological record on prehistoric societies. Since pottery is a highly traditional human skill, it provides a good basis for studies of socially oriented interpretations. The interdisciplinary project *Technological features and cultural practices in prehistoric pottery traditions in Croatia* (prePOT, 2021.-2026.) puts the Bronze Age pottery into the research focus. The research team consists of archaeologists and geologists. The study is divided into 5 case studies following five different geographical and geological areas.

The team will process and analyse several tons of pottery fragments from 4 archaeological sites, while the database will also include ceramic samples from more than 30 sites. Therefore, the study will be conducted in a wide area, especially one that is archaeologically least explored but crucial in terms of cultural influences, as well as communication routes between the eastern Adriatic area and its hinterland with the southern part of the Pannonian Plain.

## METHODOLOGY

Systematic application of analytical methods will be combined with macroscopic physical forms of examination of already excavated ceramic material. A prerequisite for the selection of archaeological material for the analysis is a well-established stratigraphic and chronological context. In the initial phase, the ceramics will be classified with the focus on typology and stylistic characteristics with the purpose of cultural and temporal determination.

At the same time, the analysis of technical indicators as well as the use-related properties (attrition and organic residue analysis) of the vessels will be carried out by observing the fresh fracture of the fragments and recording the traces visible on their surface. Selected archaeological ceramics, as well as the raw material collected near archaeological sites, will be subjected to mineralogical and petrographic analyses (optical microscopy, X-ray powder diffraction), FTIR spectroscopy, sedimentology, and geochemical analyses. A rich and complex set of data is expected as a research result.

## CHALLENGES

The primary goal is to collect information about the pottery from the aspect of raw material choice and the composition of the clay pastes that have been used for making vessels during the Bronze Age. Furthermore, the aim is to identify a manufacturing sequence of pottery making as well as to establish what kind of pottery was made (vessel form and size) and how it was used in different geographical areas within different Bronze Age cultural groups all using the same methodological framework.

The first main challenge is to design a digital database that includes all the above parameters which will produce quantitative data that can be intercompared. The second challenge relates to the interpretation of the results of interdisciplinary research, and the effort to ensure that the data sets obtained will provide a better understanding of past societies through the aspects of ecology, technology, economics, and society within the Bronze Age communities. The third challenge is to ensure that the interdisciplinary collaboration established within the research team results not only in a systematized approach to material processing and analysis, but also in producing new knowledge and completely new research questions arising from a holistic perspective.

## PERSPECTIVE

The study of the production, distribution, and use of ceramic vessels in the past involves a complex research system and individual properties cannot be understood in a reliable way independently of each other. This research programme aims to develop a holistic perspective by combining several views on pottery, from the selection of raw materials and production management to everyday vessel use in order to reach more credible explanation about past societies. Good prospects for achieving such goals come from the study of pottery throughout its entire lifecycle, the interdisciplinary research group, collaboration, data systematization, and institutionalization. However, a huge set of different types of data could present obstacles while considering and seeking answers to questions arising from a holistic perspective, as the documentation system (database) is based on separation, fragmentation, and duality. Ultimately, this study will establish a completely new knowledge and re-examine the existing ones, while the research results will aim to be interpreted through archaeologically visible and invisible phenomena.