DIGITAL ARCHAEOLOGY NETWORK

ComplexIT

Dealing with New and Old Data in Archaeology

Modern archaeological research deals not only with the complexity of the data collection process but also with the re-use of the enormous amount of information already produced by past research. Developing strategies for effective data acquisition which consider differences, incommensurability, and interpretative nuances, as well as combining and processing the accumulation of information collected in the past, are the biggest tasks for modern archaeologists.

Which digital methods can we apply for a precise and reliable acquisition, processing and interpretation of new and old data? What are the benefits and shortcomings of a standardized practice for data recording and processing? Do digital solutions help to effectively communicate the archaeological knowledge produced by these methods to a broad audience?

This workshop aims to approach possible solutions for these issues and to start a discussion about the impact of structured digital data on the production and sharing of archaeological knowledge. To achieve this, young researchers with different backgrounds will present their research and solutions for dealing with the complexity of such information.

DETAILS

Format: In person event / stream
Location: Hittorfstr. 18, 14195 Berlin
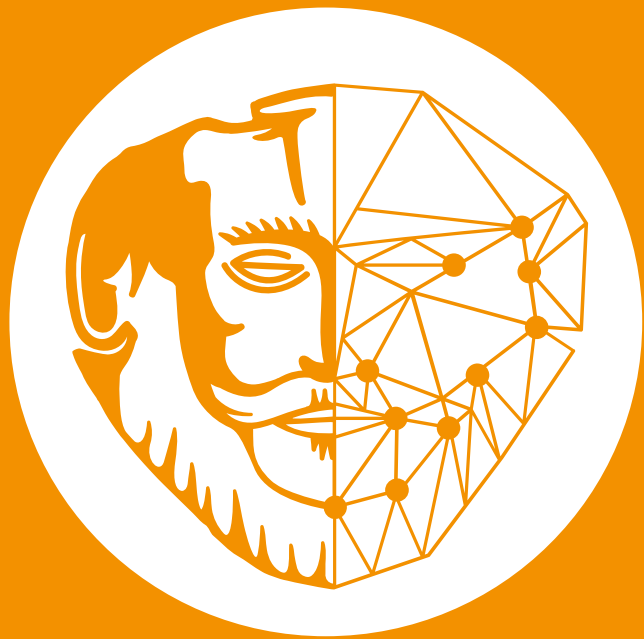**Date: November 10th**
Time: 10 am c.t. – 5 pm

CONTACT

digital.archaeology@berliner-antike-kolleg.org
www.berliner-antike-kolleg.org/digital_archaeology

REGISTRATION IS REQUIRED

BERLIN GRADUATE SCHOOL OF ANCIENT STUDIES

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Freie Universität Berlin

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10th of November 2023

10:15 – 10:30: Welcome

10:30 – 11:00: Michael Rummel (Ruprecht-Karls-Universität Heidelberg)
Pottery from Motion – A refined approach for the large-scale documentation of pottery using SfM

11:15 – 11:45: Ruben Wehrheim (Freie Universität Berlin)
Rooms to Fill – A statistical approach to the analysis of prehistoric building features

11:45 – 12:15: Andrea Valsecchi Gillmeister (Freie Universität Berlin)
Thinking Outside the Square – A case study on the validity of the method of archaeological survey

13:15 – 13:45: Daniele Zampierin (Freie Universität Berlin)
Pottery´s Digital Profile – A digital documentation and comparison of pottery drawings and morphological data

13:45 – 14:15: Sophie Schmidt (Freie Universität Berlin)
Digital Tools for Data Description and Dissemination

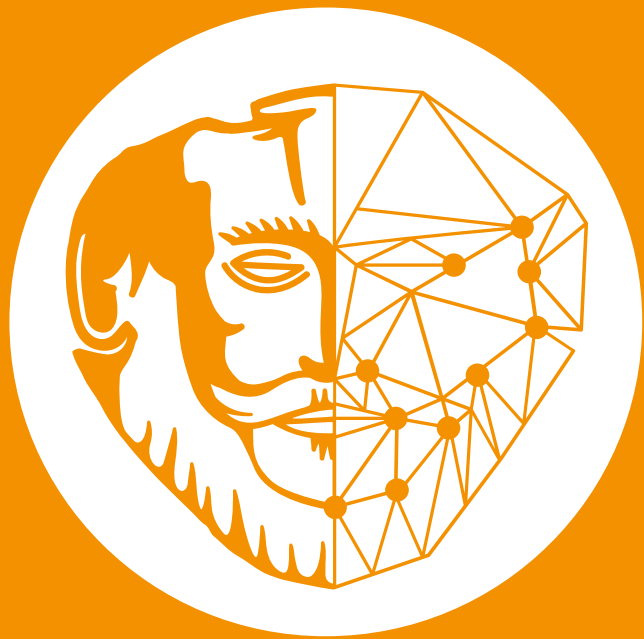14:15 – 14:45: Valery Schlegel (Freie Universität Berlin)
Tell, don´t (just) show! – Digital Storytelling for the interpretation and communication of archaeological data

15:00 – 16:00: Round Table mod. by Christoph Forster (datalino)
A Matter of Perspective – Use and reuse of Data in Archaeology

16:00 – 16:30: Conclusion

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Online Stream Information

10th of November 2023

Webinar-Topic:
ComplexIT - Dealing with New and Old Data in Archaeology

Date and Time:
Freitag, 10. November 2023 10:00 | (UTC+02:00) Amsterdam, Berlin, Bern, Rom, Stockholm, Wien

Link:
https://fu-berlin.webex.com/fu-berlin/j.php?MTID=m256120386157473172db12d293aeab83

Webinar-Number:
2793 441 7770

Webinar-Password:
tdYE5iJMx65 (83935456 via Telephone- and Videosystems)

Via Phone
+49-619-6781-9736 Germany Toll
+49-89-95467578 Germany Toll 2

Access-Code: 279 344 17770

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Michael Rummel

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Pottery From Motion

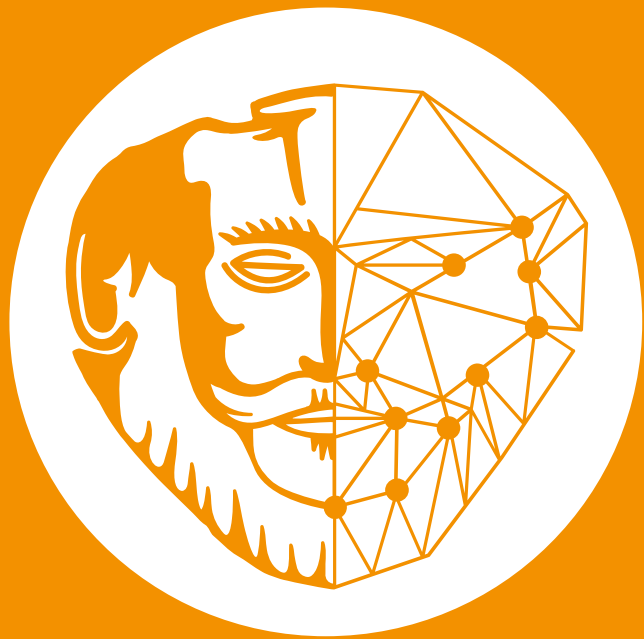*A refined approach for the large-scale documentation of pottery using SfM*

Conducting quantitative studies requires a great number of objects which correlates with longer campaigns in – most of the time - politically unstable countries and higher costs to do so.

In this paper I will present the results of a field study conducted in March 2022 where we tested a new large-scale documentation approach for pottery sherds, using the 3D capture method structure from motion, which significantly sped up the documentation process and ultimately lowered costs and campaign time on site.

I will explain in detail what workflow was conducted, how it was conducted, and which problems can occur or have to be considered while doing so. Furthermore, will I present the technological background of both, structure from motion, and 3D processing in order to create the 3D models and critically discuss the differences of this approach in comparison to the traditional method.

Lastly, I will present which kind of studies can be conducted further, using the generated 3D models on an example of a currently ongoing research project. Using this forum, I want to share our research and results in order to contribute and facilitate future research projects with the necessity of documenting a great number of sherds.

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Ruben Wehrheim

Freie Universität Berlin

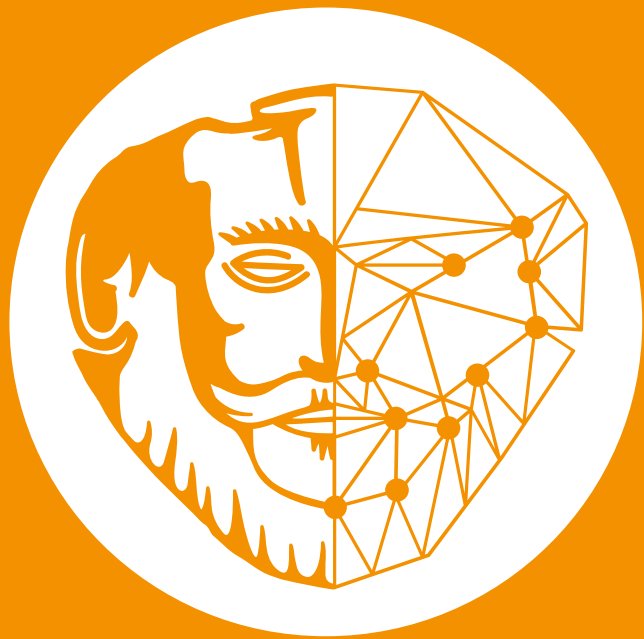ruben.wehrheim@berliner-antike-kolleg.org

Rooms to Fill

A statistical approach to the analysis of prehistoric building features

The study of houses and their integration into larger archaeological interpretation models is an underestimated and rarely used tool for understanding prehistoric civilizations. Predominantly house constructions, if they even were included, are only used to interpret settlement patterns or the settlements themselves. Furthermore, the intention of building different house types was often brushed aside as related to cultural groups instead of looking at the relationship to other reasons for their development.

In this study, I did use Bronze Age house constructions of the Pannonian Plain, excavated in the last century, to analyse and show what those houses and their research can tell about such civilizations. To achieve this, more than 500 buildings have been recorded, with over 40 attributes each. Those pieces of information, such as building types, measurements, or construction phases, have been statistically collated with each other, general archaeological and geographical information. This approach led to a high number of reliable information about the genesis of house constructions and their usage as well as the intention of their builders of the chosen materials, positions or sizes, and use of space.

Contrary to what previous research assumed, this investigation brought to light that the analysis of house construction contains not only much information about cultural processes and developments but also shows clearly, that the choice of building types is not as related to cultural groups as one may think.

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Andrea Valsecchi Gillmeister

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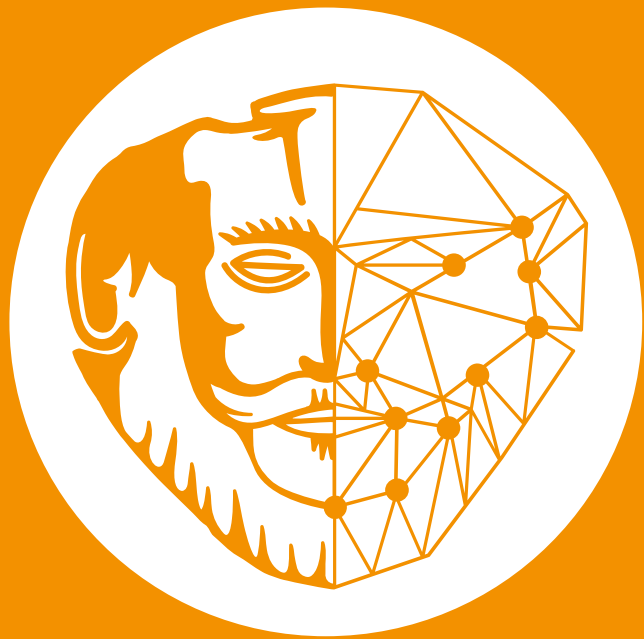
Thinking Outside the Square
A case study on the validity of the method of archaeological survey

Surface archaeological data are often the most accessible and available source of information about past cultural landscapes. In particular, survey is a well-established method for research in Northern Anatolian archaeology, where extensive regional surveys are more common than excavation. Considering this situation, the question about the reliability of modern historiography and archaeological interpretations based on the surface results for this region or other areas with a similar state of research comes to mind.

A possible approach to assess the reliability of surface collections is the cross-check against the subsurface data. The multiperiod site of Oymaağaç Höyük (Samsun, Türkiye), with its long-term multidisciplinary research, offers a solid starting point for this kind of analysis. The large dataset collected at the site in the last two decades is available in the OpenSource MySQL server-based excavation database, offering a broad range for comparison against geophysical prospections, excavation results and artefacts data.

Starting from the case study of the cross-check of the pottery assemblages at Oymaağaç Höyük, this paper aims to discuss the methodological challenges arising when comparing records documented in different periods by different specialists, and the possibilities and shortcomings of data reuse.

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Daniele Zampierin

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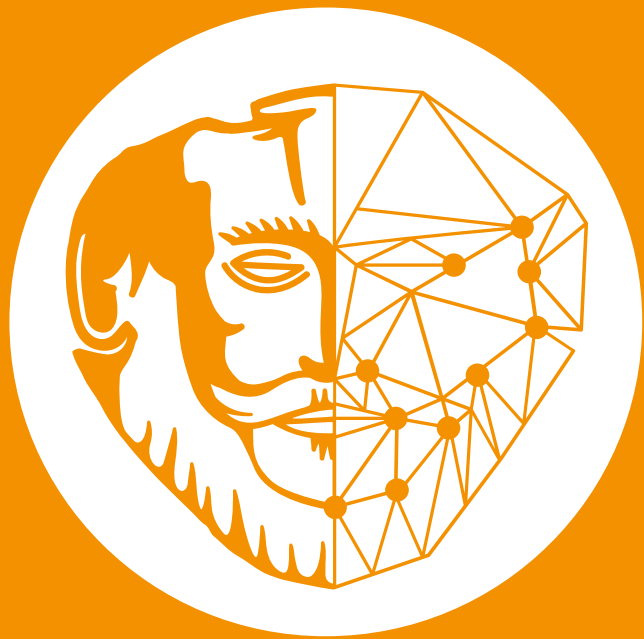
Pottery´s Digital Profile

A digital documentation and comparison of pottery drawings and morphological data

From the 3rd century BCE onwards, the Indian Ocean, in particular its Western half, has been the stage for the development of a large trade network connecting two different continents and countless different cultures. Despite being the topic of an ever-growing interest from the international archaeological and historical community, the study of the Indian Ocean trade network is still extremely fragmented, isolated and far from a comprehensive understanding of its original dynamics. Among the multiple difficulties that a researcher has to face when investigating such complex trade network, identifying the provenance of archaeological material is one of the most meaningful and complex.

To do so, the approaches can be two: material comparison and morphological comparison. However, in order to develop a substantial understanding of the trade system and of the main trade directions, the researcher should study and compare an enormous amount of data resulting from published excavations catalogues and new excavation reports.

This presentation aims to introduce the potential and the drawbacks of processing and comparing archaeological data trough digital automatization processes.

DIGITAL ARCHAEOLOGY NETWORK

Sophie Schmidt

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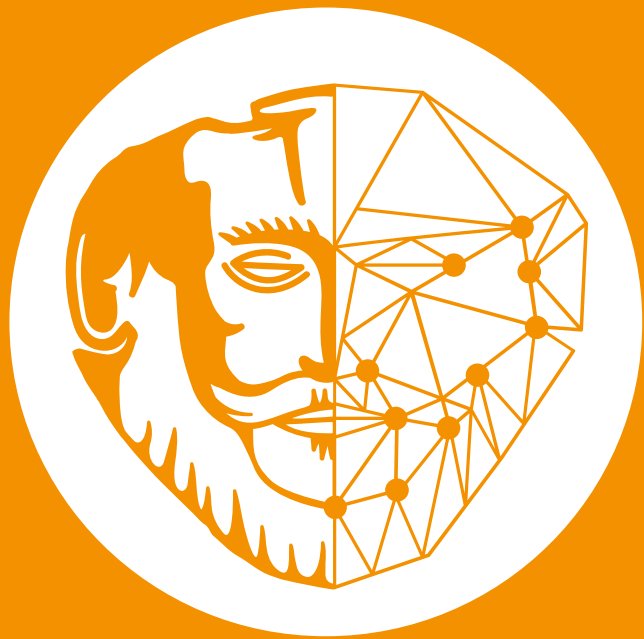## Digital Tools for Data Description and Dissemination

Every data collection is, among others, shaped by the research question for which the data is being gathered. This leads not just to variable information being collected, but also to differences in the way this information is being organised.

When trying to combine information on a topic from different sources it is a crucial step to understand exactly how the source's data has been collected, the meaning of terms used to describe values and the structure of the data collection.

This talk presents the concepts of ontologies and controlled vocabularies, as ways to formalise the description of the datasets. It links them to semantic web technologies and Linked Open Data as techniques for data publication and dissemination.

The community-driven open data hub Wikidata and other services of Wikiverse are explored as a way to share information with the general public. The examples are drawn from the authors ongoing PhD project and a Wikimedia Germany funded small side-project "Zerschlagenes Geschirr - Archäologische Quellen in Wikidata".

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Valery Schlegel

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Tell, don´t (just) show!

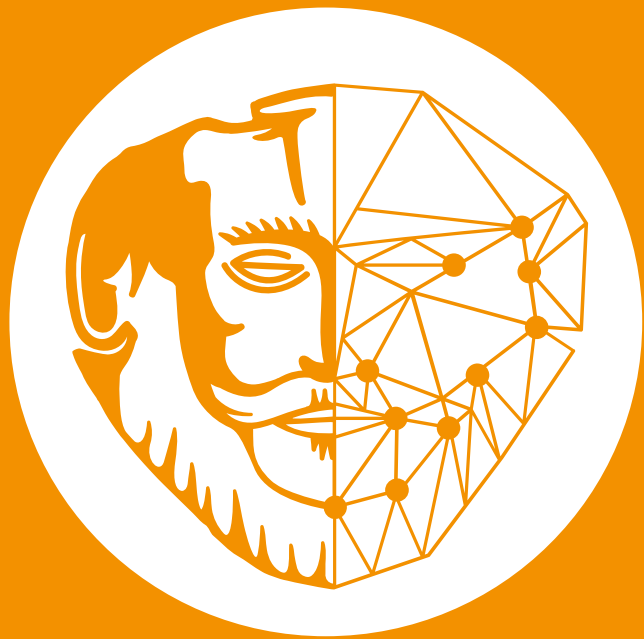*Digital Storytelling for the interpretation and communication of archaeological data*

The complexity and sheer mass of available archaeological data represents a considerable challenge to communicate it in an attractive and comprehensible way to fellow researchers, students and laypeople alike. Often, the data is worked on and presented in extensive lists, unintelligible graphs and long-winded text.

However, human brains have been wired for millennia to digest large amounts of information through stories with relatable characters, emotions and events. Additionally, modern technology has opened up a plethora of new digital programs to visualize all kinds of data. The project "Dinge mit Geschichte(n)" (of the Institute of Near Eastern Archaeology, FU Berlin) links the narrative structure of stories with digital applications to describe and explain archaeological findings.

Not only can digitally visualized stories inform peers about our data, the visualization of complex and interconnected data also enables innovative approaches to analyze and interpret the archaeological material.

This contribution aims to show how Digital Storytelling can help to effectively process our data as well as communicate the archaeological knowledge to wider audiences with a few concrete examples of digital programs and story arcs.

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Christoph Forster

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Round Table: A Matter of Perspective
Use and reuse of Data in Archaeology

With almost 20 years of experience in the field of cultural data collection, processing and presentation, Christoph Forster (datalino PartG) will moderate the round table.

The discussion will focus on the concrete possibility of data reuse in archaeology, addressing issues such as the selection and personal coloring of the recorded data, the "black box problem" of the software used and the cognitive interest of quantification.