ScapeCon 2021

No (e)Scape?

Relational Archaeology in the Aegean Bronze Age

4th International Post-Graduate and Early Career Conference

(R)evolutions:

In Search of Radical-scapes in the

Aegean Bronze Age



22-25 October 2021 *House of Culture, Rethymno, Greece* Department of History and Archaeology University of Crete

BOOK OF ABSTRACTS

Organizing committee Eleni Chreiazomenou, PhD candidate Antonis Vratsalis-Pantelaios, PhD candidate Paraskevi Vlachou, MA student

Scientific committee Artemis Karnava, Assistant Professor Nena Galanidou, Professor Katerina Kopaka, Emer. Professor



Friday 22nd October

Session I. Shaping a (R)evolution: Social Organisation and Change

Daniele VENDRAMIN, PhD candidate, Université Catholique de Louvain A Contested Landscape. Addressing Social Organisation in the Prepalatial Asterousia (Crete): the Lebena tombs as a Case-Study

Antonis VRATSALIS-PANTELAIOS, Phd Candidate, University of Crete; Giannis PASCHOS, PhD, WestLake University

Of Little Green Stones: Discussing the Bronze Age Metallurgical (R)evolution in the Aegean. A tentative view from the island of Gavdos, Crete

Georgios APOSTOLAKIS, Ma student, University of Crete (R)evolution out of destruction. The case of Crete and Keos in the Middle Bronze Age

Daniele VENDRAMIN, PhD candidate, Université Catholique de Louvain

A Contested Landscape. Addressing Social Organisation in the Prepalatial Asterousia (Crete): the Lebena tombs as a Case-Study

The social make-up of Prepalatial Crete remains mostly unexplained despite more than a century of research and fieldwork. Part of the problem lies in a lack of excavated settlements, outdated publications of several tombs, and persistent tomb looting that strongly limited the available archaeological dataset. Even if Prepalatial society is mostly seen as kinship-based with a social organisation gravitating around a system of kinship relationships, the paucity of available data together with a long-standing disillusionment over the archaeological visibility of kinship structures has refrained most archaeologists from addressing Prepalatial social structure in detail. As a consequence, most publications just comment on incipient hierarchisation and tend to generalise, suggesting either a hierarchical, heterarchical, or egalitarian social structure often following a very categorised analysis of available data.

In recent literature, however, the preconception that kinship should be regarded as archaeologically invisible bas been reconsidered and multiple ethnoarchaeological approaches have been presented to interpret the archaeological record. These now offer interesting insights on how kinship organisation can potentially be traced through a patterning of material culture.

This presentation aims at showing the validity of ethnoarchaeological approaches and addresses kinship organisation in Prepalatial Crete through an analysis of the well-excavated and well-published Circular Tombs of Lebena in South-Central Crete. Avoiding categorisation, the funerary assemblage of each tomb is analysed as a whole to reconstruct multiple dispersion patterns of material culture and potential affinities with other tombs in the region. Ethnoarchaeological and anthropological analogies will be introduced to explain the kind of kinship structures that are most likely to have generated such material culture patterns. As such it will present a step closer to addressing kinship structure and social organisation in the Lebena area and, by implication, the Prepalatial South-Central Cretan region.

Keywords: Prepalatial Crete; Asterousia; Society; Kinship; Material Culture

Antonis VRATSALIS-PANTELAIOS, Phd Candidate, University of Crete Giannis PASCHOS, PhD, Westlake University

Of Little Green Stones: Discussing the Bronze Age metallurgical (r)evolution of the Aegean communities. A tentative view from the island of Gavdos, Crete

Metallurgy is considered as one of the main driving forces for the socio-economic transformation of the Final Neolithic and Bronze Age communities. In the 3rd and 2nd Millennium BC, large mining sites procured the Aegean and Eastern Mediterranean communities with copper, silver and gold, and extensive exchange networks merged the Mediterranean World together, in a complex industry considered to be largely controlled by elite groups.

However, metallurgy was practiced in the Aegean and the Mediterranean at least since the Final Neolithic. Long before the industrialized exploitation of central mining sites, like those at Lavrion and Cyprus, the metallurgical process was likely taking place in a more locazlised manner; as suggested by the noumerous smelting sites attested in a number of Aegean islands presenting primary and secondary copper and other metal deposits, like Kythnos, Serifos, Kea and Siphnos.

Here, we draw from the preliminary results of Gavdos Archaeometallurgical Project on the Gavdiot copper ores, to explore a hypothesis on how the Early Bronze Age metallurgicalscapes were in accordance with a wider socio-economic context that appears to become radically different by the Middle and Late Bronze Age; and discuss how the 2nd millennium BC socio-economic "revolution" of the Aegean communities, was related to similar radicalscapes and thorough re-arrangements in the articulation of production.

Keywords: Metallurgy, Bronze Age Gavdos, copper procurement networks, socio-economic revolution

Georgios APOSTOLAKIS, MA student, University of Crete

(R)evolution out of destruction. The case of Crete and Keos in the Middle Bronze Age

In most cases, major catastrophes bring about dramatic consequences in the evolution of human life. In the case of Crete and Keos, the extensive catastrophes that occurred between the late MM II and early MM III periods, brought a new era of inspiration and prosperity of the so-called "Minoan" civilization.

The present announcement intends to unfold aspects of this (r)evolution and to reveal elements which emerge from the close relationships of the two Aegean islands. **Key Words:** Crete, Keos, Middle Bronze Age, Minoanisation, Aegean Interactions

Saturday 23rd October

Session II. Living a (R)evolution: Life in Times of Radical Change

Marina VELEGRAKI, PhD

The MM IIIA Building 2 at Knossos, Gypsades: Socioeconomic and cultural transformations in context

Antonis Kourkoulakos, PhD candidate, Universität Münster

Once a capital: Mobility and geo-political developments in LBA Ephesus

Piotr ZEMAN, PhD candidate, Adam Mickiewicz University

How to survive a revolution: A contextual study of the Post-palatial settlement patterns of the Argolid

Session III. Crafting a (R)evolution: Material Culture and Technology

Vivi VLACHOU, MA student, University of Crete

The relational character of technological R(e)volution: Shifts, changes and developments in scored/combed pottery in the 3rd millennium Aegean and wider Eastern Mediterranean and their association to olive oil and wine management.

Ioannis PAPPAS, PhD candidate, University of Crete

Ovens and kilns in the Aegean Bronze Age. Regional experimentation and pyrotechnological (r)evolutions

Jakub Witowski, PhD candidate, University of Wrocalw

"My friends, how can we wonder that Hector wields the spear so well? Some god is ever by his side to protect him [...]." New insights on the role of spear in the Mycenaean warfare in the light of use-wear analyses

Eleni CHREIAZOMENOU, PhD candidate, University of Crete

Stone-scapes of (r)evolution: Ground stone tool use, re-use, recycling and disuse in Bronze Age Katalymata, Gavdos

Session II. Living a (R)evolution: Life in Times of Radical Change

Marina VELEGRAKI, PhD

The MM IIIA Building 2 at Knossos, Gypsades: Socioeconomic and cultural transformations in context

Middle Minoan III (MM III) is considered as a period of transformation. Arthur Evans in his Palace of Minos, first set the period's chronological and cultural boundaries between the destruction of the Old Palaces at Knossos and Phaistos and the erection of the New Palaces, a "New Era" according to his nomenclature, defined along two pottery sub-phases, MM IIIA and MM IIIB. He characterized the first sub-phase as "a great transitional epoch" (Evans 1921, 315). Today, Evans's evaluation of MM IIIA is not only widely accepted but also further elaborated. Socio-political changes have been additionally detected, particularly concerning the Knossian influence across the island, as studies based on stratigraphy, settlement patterns and pottery distribution, not only on Crete, but throughout Southern Aegean indicate. Simultaneously, palatial architecture, Linear A script and figurative art are giving the pace of a society gradually undergoing economic and cultural transformations. This is a time of (r)evolution.

In this framework, the recently excavated MM IIIA Building 2 at Knossos Gypsades unearthed as part of The Knossos-Gypsades Excavation Project 2014-2015, a collaboration of the British School at Athens and the Ephorate of Antiquities at Heraklion, Crete- offers newly discovered material. A systematic examination of the architectural and ceramic findings from the building itself provides additional information and, subsequently, a quality assessment of the above-mentioned narrative. Furthermore, a detailed stratigraphical analysis is aiming to interpret the "life and death" of Building 2, during its lifespan between MM IIB and MM IIIA. Finally, an attempt is made to evaluate a possible economic growth and thus social change regarding the inhabitants of the Gypsades neighborhood.

Keywords: Knossos-Gypsades, Middle Minoan period, architecture, pottery, socioeconomics.

Antonis KOURKOULAKOS, PhD candidate, Universität Münster Once a capital: Mobility and geo-political developments in LBA Ephesus

During the Late Bronze Age, western Anatolia was the meeting point of two cultural traditions, the local and the Mycenaean, whereas the Hittite impact on the region is mostly known through the written sources. The Mycenaean material is present since LH IIA, but it only increases significantly during LH IIIA and LH IIIB. Western Anatolia housed a series of kingdoms, of which the most prominent was Arzawa.

Within Arzawa, we find the settlement of Ephesus, called Apaša by the Hittites, which yielded important LBA material. Excavations at Ephesus have produced Mycenaean material, which is dated solely in LH IIIA1-IIIA2, whereas in LH IIIB it is absent. The fact that Mycenaean pottery is limited only to the 14th century is an exception, especially considering that LH IIIA2-B saw the pinnacle of Mycenaean pottery presence in western Anatolia. How can the Mycenaean material be explained and what prompted the disappearance of the Mycenaean material by the end of LH IIIA2?

In the course of this presentation, it will be argued that mobile individuals contributed to the appearance of the Mycenaean material in LH IIIA at Ephesus. The Hittite texts inform us about the close political cooperation of Arzawa and Ahhiyawa (Mycenaeans) at that time, which might indicate mobile individuals from the Greek mainland as well. The military campaign of the Hittite king Muršili II in the late 14th century, acted as a catalyst for developments at the wider area and particularly at Ephesus, which might account for this material change. Following this expedition, the kingdom of Arzawa seized to exist, any alliances between Arzawa and Ahhiyawa came to an end and the intense deportation that followed this conquest contributed to Ephesus' eventual decline.

Keywords: Late Bronze Age, East Aegean, Western Anatolia, Mobility

Piotr ZEMAN, PhD candidate, Adam Mickiewicz University

How to survive a revolution: A contextual study of the Post-palatial settlement patterns of the Argolid

At the turn of 13th and 12th century BC the Mycenaean palaces in the Argolid were destroyed, and the palatial political system came to an end. However, the reasons behind this change, its exact course, and socio-economic consequences, are all still not well known despite years of research conducted in the region. The radical catastrophic narration, focused on the fall of palatial administration and disappearance of certain Mycenaean cultural traits, has dominated the field for decades. More recently, some effort has been put to change and nuance this approach, in order to better understand the post-palatial world of mainland Greece. The present paper follows this research trend, focusing on an analysis of changes in the regional settlement network between the late Palatial (ca. 1330-1200 BC) and Post-palatial period (ca. 1200-1050 BC). It is based on a holistic study of the formation, development, and decomposition of two palatial towns of the Late Bronze Argolid - Mycenae and Tiryns. A hypothesis is proposed that the organization of the post-palatial settlement network in the Argolid was partially based on the social and political networks of the palatial period, which, to some extent, have survived the fall of the palaces. Changes in the occupational patterns of Mycenae and Tiryns are analyzed on the basis of a detailed review of the architectural and funerary evidence from both sites. While at Mycenae a decline of the settlement and change of its status and function in the region, can be traced back to the middle of 13th century BC, the same period marks the rapid development of Tiryns which became an economic center of the region already in the last part of the palatial period. This trajectory has largely continued after the destruction of the palaces, when Argolid experienced a sharp decrease in the number of settlements, which started to concentrate in the south, around Tiryns.

Keywords: palatial town, occupational pattern, settlement network, Argolid

Session III. Crafting a (R)evolution: Material Culture and Technology

Vivi VLACHOU, MA student, University of Crete

The relational character of technological R(e)volution: Shifts, changes and developments in scored/combed pottery in the 3rd millennium Aegean and wider Eastern Mediterranean and their association to olive oil and wine management.

Scored and combed pottery, widely distributed in Eastern Mediterranean between the 4th- 3rd millenium BC, underwent significant changes during the latter, in terms of technology of construction, indicating a gradual replacement of the previous mainstream pottery technology in use. In reference to consumption, on the other hand, two consecutive shifts are archaeologically attested, suggesting further changes in the character and the social meaning of the consumption of liquid products such as olive oil and wine.

The transmission however of and the responses to these changes, were neither uniform nor univocal within the broad spectrum of the Mediterranean, as seen from the mode of adoption of the new technology and techniques in use and the mode of consumption of these vessels.

On this ground the present paper attempts a comparative techno-functional analysis of scored/combed vessels from the Aegean and the wider Eastern Mediterranean, in order to assess shifts and changes concerning the production and consumption of these vessels, and to offer some insights of the relational character of technological change in pottery production in the 3rd millenium BC.

Keywords: scored/combed pottery, olive oil/wine containers, techno-functional analysis.

Ioannis PAPPAS, PhD candidate, University of Crete

Ovens and kilns in the Aegean Bronze Age. Regional experimentation and pyrotechnological (r)evolutions

Excavations at various Aegean Bronze Age sites have brought to light a significant number of pottery kilns, which contribute to the study of pottery production during the Bronze Age. Since the 1970s, kilns have been the focus of various studies, which have emphasized on morphology, construction materials, firing temperatures, as well as the type of fired vessels. Another integral part of the research deals with the spatial features of the kilns, since a kiln and or its surrounding area could be part of a wider workshop.

Despite the different methodological approaches that older synthetic studies on Aegean pottery kilns have employed, their results have been equally useful. They have focused on common construction practices, especially between remote sites, which may indirectly reveal a constant mobility and exchange of ideas around firing technology. This present paper will examine more than 100 kilns from at least 46 different Aegean sites in order to interpret the (r)evolution of the form and use of the Aegean kiln at local or even supra-local level. By comparing the morphological similarities and differences of the kilns, I intend to concentrate on the potters' experimentations in the field of firing and answer the question about the (revolutionary) changes in the shape of the kilns that contributed to the improvement of the firing conditions.

Keywords: kilns, aegean, bronze age, pyrotechnology

Jakub WITOWSKI, PhD candidate, University of Wrocalw

"My friends, how can we wonder that Hector wields the spear so well? Some god is ever by his side to protect him [...]." New insights on the role of spear in the Mycenaean warfare in the light of use-wear analyses

A spear for thousands of years has been invariably considered one of the basic attributes of foot soldier. This piece of weaponry has played relevant role in almost every epoch on account of its practical use in the combat environment. It can certainly be said that its role in Bronze Age Greek military is no exception in this regard. The spear frequently occurs in Mycenaean iconography, and archaeological record have yielded numerous findings of bronze spearheads. Their morphological diversity has led scholars to take under consideration the potential functional differentiation of the respective types of Mycenaean spearheads, but as in the case of archaeological material from other parts of Europe, the debate has long been based merely on their typology.

The use-wear analyses proved to be extremely important for the studies on the function of spears in central and northern Europe of the Bronze Age. The application of traceological method has allowed to observe the presence of damage characteristic for bronze swords on the surface of examined artifacts. This fact definitely debunked widespread belief that the spear may have been used only as a throwing and thrusting weapon and bolsters the validity of the view that fighting technique with it involved also elements of fencing.

The aim of the present paper is to show the results of microscopic observations conducted on a group of thirty spearheads from mainland Greece dated back to the Late Bronze Age. In the case of a considerable part of the examined spearheads the use-wear analyses revealed a presence of widely varied damage which largely concur with those identified on other types of bladed weapons. This fact undoubtedly sheds new light on the role of spears in the Mycenaean warfare and opens completely new research perspectives.

Keywords: Mycenaean warfare, bronze spearheads, use-wear analyses, traceology.

Eleni CHREIAZOMENOU, PhD candidate, University of Crete

Stone-scapes of (r)evolution: Ground stone tool use, re-use, recycling and disuse in Bronze Age Katalymata, Gavdos

From a relational perspective, ground stone tools are not solely associated with mundane everyday practices, such as food production. They are considered to carry social meaning beyond their use value, and to often hold broader purposes, acting as components in socioeconomic and symbolic practices. In this framework, ground stone tool biographies constitute essential aspects for understanding features and patterns of social and economic organization and cultural formation. Furthermore, deviations in these patterns can constitute markers of social, economic, or overall cultural change.

The large building complex at the site of Katalymata, on the island of Gavdos, south of Crete, was extensively occupied during the Bronze Age and appears to have hosted a broad range of domestic and industrial activities. Among other rich finds, numerous ground stone tools have been recovered, associated with diverse locations, spaces, settings, and activities. Aim of this presentation is to discuss different aspects of use, re-use, recycling, and disuse of the ground stone tools from the site at Katalymata. Beginning from their primary or anticipated uses, an attempt will be made to examine changes in function, illustrated as secondary uses or associations with specific contexts in different stages of their life cycles. A view of such stone-scapes of (r)evolution - when the use of ground stone becomes qualitatively different- will be presented, in an effort to explore social and economic processes and/or change at the Bronze Age site of Katalymata.

Keywords: ground stone tools, Katalymata, Gavdos, function, secondary use

Sunday 24th October

Session IV. Embodying a (R)evolution: Ritual and Funerary Practices

Yannis Chatzikonstantinou, PhD candidate, Aristotle University of Thessaloniki Fire 'revolution' in Prepalatial Crete: Cremation and pyrotechnology

Larissa Tittl, PhD candidate, University of Melbourne

Breaking the boundaries: Sensory bodies and disruptive objects in Minoan Neopalatial cavescapes

Katarzyna Dudlik, PhD, Adam Mickiewicz University

More than just a structure. A contextual study of Prosymna's sepulchral architecture

Session V. No (e)scape the Circle: Round Table

Table 1Towards a relational archaeology of man, thing and nature

Table 2The Future of ScapeCon

Session IV. Embodying a (R)evolution: Ritual and Funerary Practices

Yannis CHATZIKONSTANTINOU, PhD candidate, Aristotle University of Thessaloniki Fire 'revolution' in Prepalatial Crete: Cremation and pyrotechnology

In the Aegean archaeology, the burning of the human body was linked exclusively with the practice of cremation and was broadly discussed within the context of social and funerary behaviour. The increasing evidence of cremains from the Neolithic until the end of the Bronze Age, show that the fire was used in multiple ways in the manipulation of the deceased and played a major role in the formulation and negotiation of social roles, relationships and identities among the members of the community. In Crete, the research, so far, has identified the use of fire as part of the primary cremation and deposition of the human remains in cremation urns, pithoid-amphorae and larnakes dated from the late Minoan period onwards, mainly in cemeteries of central and eastern Crete. Moreover, the adoption of cremation was correlated with the strong Mycenaean presence on the island and the broad interaction with regions of Asia Minor and eastern Mediterranean. However, recent excavations of Early and Middle Minoan cemeteries and the systematic macroscopic and analytical osteoarchaeological study of the human remains, underline that fire was used in various forms regarding the manipulation of the deceased rather earlier, than initially considered. Many cases, where fire was applied on human remains in low intensity have been revealed, as part of a short-term secondary ritual process taken place inside the area of the cemeteries. Moreover, there are indications of high intensity burial pyres, dating in the Prepalatial period which lasted for many hours and reached high temperatures. The burning events that took place in the Prepalatial tholos tomb cemeteries signify well-planned and systematic procedures, which would evidently require a high amount of energy expenditure and time, combined with a technological expertise in the combustion of the human body.

Keywords: Minoan archaeology, osteoarchaeology, funerary practices, cremation

Larissa TITTL, PhD candidate, University of Melbourne

Breaking the boundaries: Sensory bodies and disruptive objects in Minoan Neopalatial cavescapes

Neopalatial ritual activity in Bronze Age Crete extends beyond the standard physicality of human bodies, and the materiality of objects, reaching into the cosmological realm of otherthan-human entities and landscapes. With the rocky of Crete holding particular cosmological significance in the Minoan Bronze Age, this paper will focus on how bodies and objects engaged with the cavescape during ritual activity in ways we might call metaphorical.

Further, the cavescape was constructed as a hybrid realm, open to rupture and disrupture through the fluid materiality of both bodies and objects. Sensory affects were experienced and expressed through movement within the cave, and through the votive objects used and deposited there. These objects—double axes, blades and swords, figurines in clay and bronze—were engaged and activated. Thus, human gesture and reach is extended beyond the body and into the cavescape via deposited objects.

This paper will explore the direct insertion of double axes and other metal objects into the interstitial spaces of the Psychro Cave and the deposition of objects into a large crevice at the Jouktas Peak Sanctuary to explore the notion that these objects were used as agents of disruption, breaking the boundaries between the human and other-than-human realms. This paper will also consider if this reaching beyond the cavescape was a way to connect with the deep ancestral past and the cultural power evoked through this connection, or if it was an expression of anxiety in relation to unstable social boundaries.

Keywords: relational archaeology, human-landscape interaction, ritual deposition, ancestral power.

Katarzyna DUDLIK, PhD, Adam Mickiewicz University

More than just a structure. A contextual study of Prosymna's sepulchral architecture

All the aspects of the Mycenaean funeral and its surroundings were tightly interrelated and affected each other, including landscape, burial architecture, treatment of the body, selection of the offerings, and sequence of rites.

In this paper, I would like to give a key attention to the funerary architecture and the hypothesis of tripartite division of distinct parts and areas of action: dromos, stomion and burial chamber, that appears to have further consequences in the different stages of the ritual. These include the actual ceremony of placing the body inside the grave together with burial assemblages, and various actions undertaken as a part of the liminal and postliminal rites. First, the space of the dromos should be mentioned, as it was most likely intended only for a selection of people, leaving the rest of the group outside in a sphere of limited visibility. Second, the interrelated sphere of the chamber should be acknowledged, as a shelter for the buried body which further excludes some attendants of the funeral. The additional architectural features could facilitate the customary rites on one hand, while on the other, they could reflect a set of beliefs in a presence and participation of the dead in the commemorative rites in their honour.

The above hypothesis will be discussed on the basis of the study of one of the key sites from Argolid - the cemetery of Prosymna. The structural analysis of more than fifty chamber tombs dating to the LH I - LH IIIB period allows us to trace the execution, development, and transformation of focal elements of mortuary architecture at the site. However, the most important is the impact of the architecture which not only stimulates certain and precise ritual actions, but also forces changes in the form and course of the rite with each modification in its execution.

Keywords: burial customs, funerary architecture, Prosymna

Session V. No (e)scape the Circle: Round Table Discussion

Table 1: Towards a relational archaeology of man, thing and nature

- a. What is and what is not relational archaeology?
- b. Is the relational approach imperative for Scapecon?
- c. What is a Relational archaeology of the Aegean Bronze Age?
- d. "(R)evolutions" in relational archaeology?

Table 2: The Future of ScapeCon

- a. Purpose of the conference
- Institutionalization and Structure of Scapecon: assignment process and eligibility, organizing and scientific committees, role of past committees, standardized name format, code of ethics, eligible academic ranking for participation
- c. ScapeCon Community: academic platform, financial solidarity for future committees and participants
- d. Future prospects

List of contributors

- 1. Georgios APOSTOLAKIS, MA student, University of Crete (g.a.official@hotmail.com)
- 2. Yannis CHATZIKONSTANTINOU, PhD candidate, Aristotle University of Thessaloniki (giannis.chat@gmail.com)
- 3. Eleni CHREIAZOMENOU, PhD candidate, University of Crete (eleni_chr@hotmail.com)
- 4. Kasia DUDLIK, PhD, Adam Mickiewicz University (kasia.dudlik@gmail.com)
- 5. Antonis KOURKOULAKOS, PhD candidate, Westfälische Wilhelms-Universität Münster. (akourkoulak@gmail.com)
- 6. Ioannis PAPPAS, PhD candidate, University of Crete (ugarit3@gmail.com)
- 7. Ioannis PASCHOS, PhD, Westlake University (gianpas@westlake.edu.cn)
- 8. Larissa TITTL, PhD Candidate, The University of Melbourne (larissa.tittl@unimelb.edu.au)
- 9. Marina VELEGRAKI, PhD, Archaeologist (marvel8@yahoo.com)
- 10. Daniele VENDRAMIN, PhD candidate, Université Catholique de Louvain (daniele.vendramin@uclouvain.be)
- 11. Paraskevi VLACHOU, MA student, University of Crete (vivivlachou4@gmail.com)
- 12. Antonis VRATSALIS- PANTELAIOS, PhD candidate, University of Crete (avratsalis@hotmail.com)
- 13. Piotr ZEMAN, PhD candidate, Adam Mickiewicz University (piozeman@gmail.com)
- 14. Jakub WITOWSKI, Phd Candidate, University of Wrocław (hoplictwo@gmail.com)

