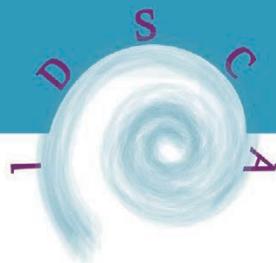


International
Doctoral
Student
Conference on
Archaeology

Zagreb, 15-17 April 2015

Conference Programme and Book of Abstracts



University of Zagreb
Faculty of Humanities and Social Sciences
Archaeological Institute of the Department of Archaeology

**INTERNATIONAL DOCTORAL STUDENT CONFERENCE
ON ARCHAEOLOGY
(IDSCA)**

ZAGREB, APRIL 15–17, 2015

CONFERENCE PROGRAMME AND BOOK OF ABSTRACTS



University of Zagreb
Faculty of Humanities and Social Sciences
Archaeological Institute of the Department of Archaeology

PUBLISHER

Faculty of Humanities and Social Sciences, University of Zagreb

FOR THE PUBLISHER

Dean Professor Vlatko Previšić, PhD

ORGANIZER

Archaeological Institute of the Department of Archaeology, Faculty of Humanities and Social Sciences, University of Zagreb

ORGANIZING COMMITTEE

Mirjana Sanader, Iva Kaić

SCIENTIFIC COMMITTEE

Assist. Prof. Dr. Marcel Burić, Dr. Dino Demicheli, Dr. Željko Demo, Museum Advisor, Assoc. Prof. Dr. Mirja Jarak, Dr. Iva Kaić, Dr. Daria Ložnjak Dizdar, Research Associate, Dr. Janja Mavrović Mokos, Prof. Dr. Marina Milićević Bradač, Dr. Ina Miloglav, Dr. Ana Pavlović, Prof. Dr. Mirjana Sanader, Dr. Zrinka Šimić-Kanaet, Assist. Prof. Dr. Domagoj Tončinić

EDITOR

Iva Kaić

LANGUAGE EDITOR

Assia Barić

PRODUCTION AND DTP

Boris Bui, FF Press

COVER

Boris Bui, FF Press

PRESS**PRINT RUN**

100 copies

ISBN

978-953-175-555-9

CIP zapis je dostupan u računalnome katalogu Nacionalne i sveučilišne knjižnice u Zagrebu pod brojem 000902988.

The Conference is financially supported by the Faculty of Humanities and Social Sciences, University of Zagreb.

SPONSOR

Beta Analytic Ltd.



INTERNATIONAL **D**OCTORAL **S**TUDENT **C**ONFERENCE
ON **A**RCHAEOLOGY
(**IDSCA**)

ZAGREB, APRIL 15–17, 2015

CONFERENCE PROGRAMME AND BOOK OF ABSTRACTS

EDITOR
IVA KAIĆ

The logo for FF press, featuring the letters 'FF' in a stylized, bold font with a horizontal line through them, followed by the word 'press' in a lowercase, sans-serif font.

University of Zagreb
Faculty of Humanities and Social Sciences
Archaeological Institute of the Department of Archaeology

Zagreb 2015

CONTENTS

Welcome Note.....	9
Conference Programme	11
Lecture Abstracts.....	17
Nikolina ANTONIĆ, <i>Strap-end from Šepkovčica</i>	17
Raluca-Eliza BĂTRÎNOIU, <i>Considerations on the Dynamics of Getic Settlements in Wallachia (4th century BCE – 1st Century CE)</i>	17
Anja BERTOL, <i>The Mazin Hoard</i>	18
Silvia BETINELLI, <i>Nemesis in the Roman East</i>	18
Bruno BIJAĐIJA, <i>Roman Architecture in Konavle</i>	19
Imola BODA, <i>The Sacred Topography of Colonia Sarmizegetusa</i>	19
Jan BULAS, <i>The Invasion of the Vandals - Cultural Changes in the Roman Period in the Upper Tisza Region. An Archaeological and Historical Perspective</i>	20
Eva BUTINA, <i>The Material Culture of Identity and Memory Construction at the Protestant Center in Govče</i>	20
Riccardo CECOVINI, <i>The Territorial Organization Along the Ancient Road Aquileia-Emona in the Early Middle Ages: Crisis and Transformations</i>	21
Ladislav CHMELO, <i>Western Influence on Hallstatt Culture in the Northeast Alpine Region</i>	21
Florin CIULAVU, <i>Archaeological Research Inside the Mint Complex of Alba Iulia, Romania</i>	22
Péter CZUKOR, <i>A Late Bronze Age Fortified Settlement at Makó-Rákos, Császárvár, and the Research of Its Hinterland</i>	23
Lina DIERS, <i>Identifying Urban Settlements in Roman Moesia: Problems and Possibilities</i>	23
Laura-Simona DRAȘOVEAN, <i>Casting the Stone: Lithic Variability in the Neolithic of the Romanian Banat Region</i>	24
Tomasz DZIURDZIK, <i>Roman Military Headquarters: Religious Ceremonies and the Use of Space</i>	25
Ana ĐURIČIĆ, <i>Vinča Culture Ovens – from Cinnabarite to Bread: a Review of the Interpretations and the Role of Ethnology in Archaeological Studies</i>	25
István Gergő FARKAS, <i>Revisited: 3D Epigraphy and an Old-New Roman Milestone from Pécs</i>	26
Ágota FERENCZ-MÁTÉFI, <i>Preliminary Results of the Study of Roman and Late Roman Pottery from Környe, Hungary</i>	26
Mateja HULINA, <i>Lipid Residue Analysis of Neolithic Pottery from Eastern Croatia</i>	27
Dora IVANIŠEVIĆ, <i>The Cost of Sarcophagi in Salona in Late Antiquity</i>	27
Szymon JELLONEK, <i>Caligula's Coins as Evidence of Imitatio Augusti</i>	28
Jelena JOVANOVIĆ, <i>Core-Formed Glass Vessels in the Archaeological Museum in Split</i>	28
Palma KARKOVIĆ TAKALIĆ, <i>Some Considerations on the Iconographic Characteristics of the Isiac Monuments from Salona</i>	28
Julia KOCH, <i>Phrygian Doorstones in Roman Dalmatia and Northern Anatolia. Bridging the Gap</i> ...	29

Elena LEGHISSA, <i>The Pile Dwellings near Ig (Ljubljansko barje, Slovenia): A New View of the Ceramic Finds</i>	29
Nándor LEHRER, <i>Inter-Municipal Connections in the Roman Empire. A Theoretical and Methodological Survey</i>	30
Michał LINK-LENCZOWSKI, <i>Clay Tobacco Pipes from Kazimierz, Kraków</i>	31
Zuzana LITVIAKOVÁ, <i>Fortified Settlement from Early Bronze Age in Hoste (SW Slovakia) – New Results and Perspectives</i>	31
Dunja MARTIĆ, <i>Mujina pećina – Preliminary Use-Wear Analysis</i>	31
Tonka MATANA, <i>A Review of the Current State of Research on the Early Medieval Period in Dubrovnik</i>	32
Ana MIKULKA, <i>The Anthropological Analysis of Osteological Remains from the Archaeological Site of the Church of Our Lady of the Mountain in Lobar (Croatia)</i> ..	33
Miro NAD, <i>Coin Circulation in the Southern Part of Pannonia Superior from AD 193 until the Cessation of Regular Coin Supply to the Region – the Methodology</i>	33
Szabolcs NAGY, <i>The Castles of Várpalota and Ilok: Concurrent Building Activities of Nicholas of Ilok?</i>	34
Luciana NEDELEA, <i>Paleodermatoglyphics and the Roman Fort Potaissa. The Documentation of Ancient Fingerprints and the Analysis of Roman Pottery</i>	34
Réka NEMÉNYI – Csaba SZABÓ, <i>The Missing Community - A Revision of the So-Called “Early Christian” Artifacts from Apulum and Its Territory</i>	35
Michaela NIKLOVÁ, <i>Perspectives on Household Archaeology in Slovakia</i>	35
Kamila NOCOŇ, <i>Casseroles, Frying Pans, Cooking Pots. Cooking Utensils from the Hellenistic Period from the Paphos Agora</i>	36
Jadwiga OLBROT, <i>Heating Devices in Medieval Monasteries in Poland</i>	36
Ioan OPREA, <i>Bone Working in Apulum, Dacia Superior</i>	37
Annamária-Izabella PÁZSINT, <i>The Private Associations of the Greco-Roman World: An Architectural Approach</i>	38
Jona PETEŠIĆ, <i>Saint John in the Nature Park Telaščica</i>	38
Aura PICCIONI, <i>Sacra Privata in Archaic Italy</i>	39
Zrinka PREMUŽIĆ, <i>Bioarchaeological Analyses of Late Bronze Age Cemeteries in the Southern Carpathian Basin</i>	39
Anna PRISKIN, <i>New Possibilities in the Research on the Economy of the Late Bronze Age in Hungary</i>	40
Marta RAKVIN, <i>The Moslavina Region during the Late Bronze and Early Iron Age</i>	40
Vinita RAMLJAK - Carmen Anita BARÁTH, <i>The Problem with Human Representations in Late Avar Art</i>	41
Mirko RAŠIĆ, <i>The Archaeological Site Gračine near the City of Ljubuški</i>	42
Luciana RUMEGA-IRIMUŞ, <i>Pottery Finds of the Basarabi Type in the Mures Valley. A Chronological and Typological Approach</i>	42

Vlad RUMEGA-IRIMUŞ, <i>The GIS Data Repository of Roman Mining Heritage from the Golden Quadrilateral Area in the Apuseni Mountains, Transylvania</i>	43
Petra STIPANČIĆ, <i>Novo mesto – Kapiteljska njiva. Late Bronze Age Graves – A Time of Change at Kapiteljska njiva</i>	44
András SZABÓ, <i>A Silver Magical Lamella from the Northern Cemetery of Sopianae (Pécs, Hungary)</i>	44
Dénes SZABÓ, <i>Ritual Deposits from the Rural Settlements of the 10th-13th Century Carpathian Basin</i>	45
Kata SZILÁGYI, <i>Analysis of Household Units from Chipped Stone Tools</i>	45
Miroslava ŠURINOVÁ, <i>Is Every Roman Fort a Fort? Problems with the Identification of Roman Forts in Egypt</i>	46
Gergely TÓTH, <i>Roman Weapons from Aquincum</i>	46
Malvinka URÁK, <i>Late Iron Age Settlement Structures in the Eastern Carpathian Basin. The Case Study of the Settlement Features from Giarmata (Timiș county) and Cicir (Arad county), Romania (4th-3rd century BCE)</i>	47
Tünde VÁGÁSI, <i>The Representation of the Mithras and Dolichenus Cults in the Pannonian Army</i>	47
Mária VARGHA, <i>Domus Dei, Porta Caeli? Field Cemeteries as Precursors of Churchyards in Medieval Hungary</i>	48
Mirna VUKOV, <i>Some Questions on Roman Food Supply in the Area of the Danube and Dalmatae Limes. Overview of the Published Amphorae from Roman Military Sites in Croatia</i>	48
Maciej WACŁAWIK, <i>Why Did the Ancients Make Counterweights in the Shape of an Acorn?</i>	49
Barbara ZAJAC, <i>The Political, Economic and Cultural Situation in Cappadocia Based on the Provincial Coinage from the Reign of Trajan (AD 98-117)</i>	49
Ákos ZIMONYI, <i>Being a Physician in the 10th Region of Italy (Venetia et Histria) During the Principate</i>	50
Valentina ZOVIĆ, <i>Munificence of Public Games and Entertainment Buildings in Roman Dalmatia</i>	51
List of Participants.....	52
Notes.....	62

WELCOME NOTE

The European Higher Education Area (<http://www.ehea.info/>) was created in Paris, in 1998. A year later in Bologna, 30 European countries accepted the idea behind this project. Thus a new system of higher education was established, called the Bologna Process, and the Republic of Croatia has been a part of it since 2001.

The Bologna Process has brought many changes to the higher education system, not only at the undergraduate and graduate levels, but at the postgraduate level as well. Although these changes provoked different reactions in the long-established education system, they proved to be revolutionary for students. Among the many changes, we would like to emphasize two on this occasion. The first one allows students to conduct part of their undergraduate and graduate programme outside of their domicile university. The second one is directly related to doctoral studies and aims to enhance mobility and international scientific research, as well as offer opportunities for various research grants.

This new approach to studying at the post-graduate level has signalled the importance of organizing doctoral conferences where postgraduate students could discuss their research results at an international level, exchange ideas, and gain lecture experience.

The Archaeological Institute of the Department of Archaeology, Faculty of Humanities and Social Sciences, University of Zagreb, following the latest trends in the Bologna Process, as well as considering the needs of doctoral candidates, established a conference series titled *International Doctoral Student Conference on Archaeology*, where doctoral students have the opportunity to present and discuss their research.

The conference aims to promote an exchange of ideas derived from various archaeological disciplines (Prehistoric, Classical, Roman Provincial, Early Christian, Medieval and Post-medieval Archaeology, and Archaeometry), and similar scientific branches (Ancient History, Classical Philology). The presence of relevant, well-known, experienced researchers from these areas ensures an expert, high-quality supervision of the presentations.

By bringing together excellent PhD students and experienced researchers at a professional and social forum, a stimulating environment is created. In this way, doctoral students from numerous well-known universities and research institutions are able to not only present their ongoing research, but also exchange ideas, establish informal networks and even initiate future joint research. The concept of such a doctoral conference on archaeology has proven to be necessary, as evidenced by the fact that 65 participants from various European countries registered for the IDSCA 2015 Conference, with a wide range of lecture topics. The lecture abstracts were selected by the Organizing Committee of the Conference, and the lectures were organized into 13 sessions.

On behalf of the Archaeological Institute of the Department of Archaeology, I would like to thank all participants for contributing to the success of the IDSCA 2015 conference.

Mirjana Sanader

Head of the Archaeological Institute
of the Department of Archaeology,
Faculty of Humanities and Social
Sciences, University of Zagreb

PROGRAMME

WEDNESDAY, 15TH APRIL 2015

9.00-10.00 Registration

10.00-10.15 Conference opening

10.15-11.30 SESSION 1. THE PALAEOLITHIC AND THE NEOLITHIC (CHAIR: MARCEL BURIĆ)

Dunja Martić (Faculty of Humanities and Social Sciences, University of Zagreb), *Mujina pećina – Preliminary Use-Wear Analysis.*

Laura-Simona Draşovean (Institut für Prähistorische Archäologie, Freie Universität Berlin), *Casting the Stone: Lithic Variability in the Neolithic of the Romanian Banat Region.*

Ana Đuričić (Faculty of Philosophy, University of Belgrade), *Vinča Culture Ovens – from Cinna-barite to Bread: a Review of the Interpretations and the Role of Ethnology in Archaeological Studies.*

Mateja Hulina (Faculty of Humanities and Social Sciences, University of Zagreb), *Lipid Residue Analysis of Neolithic Pottery from Eastern Croatia.*

Kata Szilágyi (Eötvös Loránd University, Budapest), *Analysis of Household Units from Chipped Stone Tools.*

11.30-11.45 Discussion

11.45-12.00 Coffee break (hall A-018)

12.00-13.15 SESSION 2. THE BRONZE AGE (CHAIR: JANJA MAVROVIĆ MOKOS)

Péter Czukor (Eötvös Loránd University, Budapest), *A Late Bronze Age Fortified Settlement at Makó-Rákos, Császárvár, and the Research of Its Hinterland.*

Elena Leghissa (Institute of Archaeology ZRC SAZU, Ljubljana), *The Pile Dwellings near Ig (Ljubljansko barje, Slovenia): A New View of the Ceramic Finds.*

Zuzana Litviaková (Faculty of Philosophy, Comenius University, Bratislava), *Fortified Settlement from Early Bronze Age in Hoste (SW Slovakia) – New Results and Perspectives.*

Zrinka Premužić (Institute for Anthropological Research, Zagreb), *Bioarchaeological Analyses of Late Bronze Age Cemeteries in the Southern Carpathian Basin.*

Anna Priskin (University of Pécs & Universitat Autònoma de Barcelona), *New Possibilities in the Research of the Economy of the Late Bronze Age in Hungary.*

13.15-13.30 Discussion

13.30-15.00 Lunch

15.00-16.30 SESSION 3. THE IRON AGE (CHAIR: DARIA LOŽNJAK DIZDAR)

Marta Rakvin (Faculty of Humanities and Social Sciences, University of Zagreb), *The Moslavina Region during the Late Bronze and Early Iron Age.*

Petra Stipančić (Dolenjski muzej Novo Mesto), *Novo mesto – Kapiteljska njiva. Novo mesto – Kapiteljska njiva. Late Bronze Age Graves – A Time of Change at Kapiteljska njiva.*

Ladislav Chmelo (Constantine the Philosopher University, Nitra), *Western Influence on Hallstatt Culture in Northeast Alpine Region.*

Luciana Rumega-Irimuş (Vasile Pârvan Institute of Archaeology, Bucharest), *Pottery Finds of the Basarabi Type in the Mures Valley. A Chronological and Typological Approach.*

Raluca-Eliza Bătrînoiu (University of Bucharest), *Considerations on the Dynamics of Getic Settlements in Wallachia (4th century BCE – 1st Century CE).*

Malvinka Urák (Babeş-Bolyai University, Cluj-Napoca), *Late Iron Age Settlement Structures in the Eastern Carpathian Basin. The Case Study of the Settlement Features from Giarmata (Timiş county) and Cicir (Arad county), Romania (4th-3rd century BCE).*

16.30-16.45 Discussion

16.45-17.00 Coffee Break (hall A-018)

17.00-18.15 SESSION 4. CLASSICAL ARCHAEOLOGY AND THE HELLENISTIC PERIOD (CHAIR: MARINA MILIČEVIĆ BRADAČ)

Jelena Jovanović (Archaeological museum Split), *Core-Formed Glass Vessels in the Archaeological Museum in Split.*

Kamila Nocon (Jagiellonian University, Kraków), *Casseroles, Frying Pans, Cooking Pots. Kitchen utensils from the Hellenistic Period from Paphos Agora.*

Annamária-Izabella Pázsint (Babeş-Bolyai University, Cluj-Napoca), *The Private Associations of the Greco-Roman World: An Architectural Approach.*

Aura Piccioni (Regensburg University), *Sacra Privata in Archaic Italy.*

Maciej Waclawik (Jagiellonian University, Kraków), *Why Did the Ancients Make Counterweights in the Shape of an Acorn?*

18.15-18.30 Discussion

THURSDAY, 16TH APRIL 2015

9.00-10.00 SESSION 5. ROMAN PROVINCIAL ARCHAEOLOGY (CHAIR: IVA KAIĆ)

Lina Diers (University of Vienna), *Identifying Urban Settlements in Roman Moesia: Problems and Possibilities.*

Jan Bulas (Jagiellonian University, Kraków), *The Invasion of the Vandals - Cultural Changes in the Roman Period in the Upper Tisza Region. An Archaeological and Historical Perspective.*

András Szabó (University of Pécs), *A Silver Magical Lamella from the Northern Cemetery of Sopianae (Pécs, Hungary).*

Bruno Bijadija (University of Zadar), *Roman Architecture in Konavle.*

10.00-10.15 Discussion

10.15-10.45 Coffee Break (hall A-018)

10.45-12.30 SESSION 6. THE ROMAN ARMY (CHAIR: DOMAGOJ TONČINIĆ)

Mirna Vukov (Faculty of Humanities and Social Sciences, University of Zagreb), *Some Questions on Roman Food Supply in the Area of the Danube and Dalmatae Limes. Overview of the Published Amphorae from Roman Military Sites in Croatia.*

Mirko Rašić (University of Zadar), *The Archaeological Site Gračine near the City of Ljubuški.*

Tomasz Dziurdzik (Institute of Archaeology, University of Warsaw), *Roman Military Headquarters: Religious Ceremonies and the Use of Space.*

Tünde Vágási (Eötvös Loránd University, Budapest), *The Representation of the Mithras and Dolichenus Cults in the Pannonian Army.*

Gergely Tóth (Eötvös Loránd University, Budapest), *Roman Weapons from Aquincum.*

Miroslava Šurinová (Charles University, Prague), *Is Every Roman Fort a Fort? Problems with the Identification of Roman Forts in Egypt.*

Julia Koch (Bamberg University), *Phrygian Doorstones in Roman Dalmatia and Northern Anatolia. Bridging the Gap.*

12.30-12.45 Discussion

12.45-14.30 Lunch

14.30-15.30 SESSION 7. EPIGRAPHY (CHAIR: DINO DEMICHELI)

István Gergő Farkas (University of Pécs), *Revisited: 3D Epigraphy and an Old-New Roman Milestone from Pécs.*

Ákos Zimonyi (Eötvös Loránd University, Budapest), *Being a Physician in the 10th Region of Italy (Venetia et Histria) During the Principate.*

Valentina Zović (Juraj Dobrila University of Pula), *Munificence of Public Games and Entertainment Buildings in Roman Dalmatia.*

Dora Ivanišević (Central European University, Budapest), *The Cost of Sarcophagi in Salona in Late Antiquity.*

15.30-15.45 Discussion

15.45-16.15 Coffee break (hall A-018)

16.15-17.30 SESSION 8. RELIGION AND BEYOND (ROMAN PROVINCIAL AND EARLY CHRISTIAN ARCHAEOLOGY) (CHAIR: MIRJANA SANADER)

Silvia Betinelli (National and Kapodistrian University of Athens), *Nemesis in the Roman East.*

Palma Karković Takalić (Faculty of Humanities and Social Sciences, University of Rijeka), *Some Considerations on the Iconographic Characteristics of the Isiac Monuments from Salona.*

Imola Boda (Babeş-Bolyai University, Cluj-Napoca), *The Sacred Topography of Colonia Sarmizegetusa.*

Ioan Oprea (Alexandru Ioan Cuza University, Iaşi), *Bone Working in Apulum, Dacia Superior.*

Réka Neményi – Csaba Szabó (University of Pécs), *The Missing Community - A Revision of the So-Called "Early Christian" Artifacts from Apulum and Its Territory.*

17.30-17.45 Discussion

17.45-18.15 Presentation of the *Proceedings of the First Croatian-Hungarian PhD Conference on Ancient History, Budapest, 02-04 October 2014*

18.15-20.00 Visit to the Archaeological Museum in Zagreb (free entrance and guidance)

FRIDAY, 17TH APRIL

9.00- 9.30 SESSION 9. ROMAN POTTERY (CHAIR: ZRINKA ŠIMIĆ KANAET)

Luciana Nedelea (Babeş-Bolyai University, Cluj-Napoca), *Paleodermatoglyphics and the Roman Fort Potaissa. The Documentation of Ancient Fingerprints and the Analysis of Roman Pottery.*

Ágota Ferencz-Mátéfi (University of Pécs), *Preliminary Results of the Study of Roman and Late Roman Pottery from Környe, Hungary.*

09.30-09.45 Discussion

09.45-10.45 SESSION 10. NUMISMATICS (CHAIR: ANA PAVLOVIĆ)

Anja Bertol (Archaeological museum in Zagreb), *The Mazin Hoard.*

Szymon Jellonek (Jagiellonian University, Kraków), *Caligula's Coins as Evidence of Imitatio Augusti.*

Barbara Zając (Jagiellonian University, Kraków), *The Political, Economic and Cultural Situation in Cappadocia Based on the Provincial Coinage from the Reign of Trajan (AD 98-117)*

Miroslav Nađ (Archaeological museum in Zagreb), *Coin Circulation in the Southern Part of Pannonia Superior from AD 193 until the Cessation of Regular Coin Supply to the Region – the Methodology.*

10.45-11.00 Discussion

11.00-11.30 Coffee Break (hall A-018)

11.30-13.15 SESSION 11. MEDIEVAL ARCHAEOLOGY (CHAIR: ŽELJKO DEMO)

Riccardo Cecovini (University of Trieste & University of Udine), *The Territorial Organization Along the Ancient Road Aquileia-Emona in the Early Middle Ages: Crisis and Transformations.*

Vinita Ramljak (Faculty of Humanities and Social Sciences, University of Zagreb) - Carmen Anita Baráth (Dornyai Béla múzeum, Salgótarján), *The Problem with Human Representations in Late Avar Art.*

Szabolcs Nagy (Eötvös Loránd University, Budapest), *The Castles of Várpalota and Ilok: Concurrent Building Activities of Nicholas of Ilok?*

Mária Vargha (Central European University, Budapest), *Domus Dei, Porta Caeli? Field Cemeteries as Precursors of Churchyards in Medieval Hungary*

Dénes Szabó (Eötvös Loránd University, Budapest), *Ritual Deposits from the Rural Settlements of the 10th-13th Century Carpathian Basin*

Jadwiga Olbrot (Jagiellonian University, Kraków), *Heating Devices in the Medieval Monasteries of Poland.*

Ana Mikulka (Faculty of Humanities and Social Sciences, University of Zagreb), *The Anthropological Analysis of Osteological Remains from the Archaeological Site of the Church of Our Lady of the Mountain in Lobor (Croatia)*

13.15-13.30 Discussion

13.30-15.00 Lunch

15.00-16.00 SESSION 12. MEDIEVAL AND MODERN AGE ARCHAEOLOGY (CHAIR: MIRJA JARAK)

Jona Petešić (University of Zadar), *Saint John in the Nature Park Telašćica.*

Tonka Matana (Faculty of Humanities and Social Sciences, University of Zagreb), *A Review of the Current State of Research on the Early Medieval Period in Dubrovnik.*

Nikolina Antičić (Faculty of Humanities and Social Sciences, University of Zagreb), *The Christianization of Turopolje.*

Michał Link-Lenczowski (Jagiellonian University, Kraków), *Clay Tobacco Pipes from Kazimierz, Kraków.*

16.00-16.15 Discussion

16.15-16.45 Coffee break (hall A-018)

16.45-18.00 SESSION 13. ARCHAEOOMETRY AND METHODOLOGY (CHAIR: INA MILOGLAV)

Michaela Niklová (Constantine the Philosopher University, Nitra), *Perspectives on Household Archaeology in Slovakia.*

Vlad Rumega-Irimuş (Vasile Pârvan Institute of Archaeology, Bucharest), *The GIS Data Repository of Roman Mining Heritage from the Golden Quadrilateral Area in the Apuseni Mountains, Transylvania.*

Florin Ciulavu (Vasile Pârvan Institute of Archaeology, Bucharest), *Archaeological Research Inside the Mint Complex of Alba Iulia, Romania.*

Nándor Lehrer (Institute of History, University of Debrecen), *Inter-Municipal Connections in the Roman Empire. A Theoretical and Methodological Survey.*

Eva Butina (University of Ljubljana), *The Material Culture of Identity and Memory Construction at the Protestant Center in Govče.*

18.00-18.15 Discussion

18.15 Closing of the Conference

LECTURE ABSTRACTS

*NIKOLINA ANTONIĆ***Strap-end from Šepkovčica**

The Site of Šepkovčica is one of the biggest Bijelo Brdo period settlements discovered in Northern Croatia. The site is situated in Turopolje, a plain south of the Sava River, called *Campus Zagrebiensis* in the medieval period. Along with the early medieval horizon, the site has continuity until the fifteenth century. However, while this latter period is known from the written sources, for the early medieval horizon the archaeological research is crucial. The early medieval part of the site is interpreted as parts of settlement units. Along with pottery material lots of metal objects were discovered. Mostly they are objects for everyday use (nails, knives, needles etc.). Some of them were pieces of jewelry, like two s-shaped hair-rings as well as one Volyn type earring, both typical for the Bijelo Brdo culture. Also a very valuable object is one, still unpublished, strap-end. It was found in a closed unit, a pit that along with it contained pottery and animal bones. In this paper, after briefly presenting the site, I will try to do a stylistic analysis of this object and its chronological determination. I will try to elaborate where we can find the closest parallels and see if it is possible to determine the origin of the strap-end. The fact that Turopolje is a bordering area between the Hungarian Kingdom in the north and the Croatian Kingdom in the south, as well as that this period of the history of the northern Croatia is practically unknown, makes any conclusions about influences that archaeology can possibly tell us more interesting and valuable.

*RALUCA-ELIZA BĂTRÎNOIU***Considerations on the Dynamics of Getic Settlements in Wallachia (4th century BCE – 1st Century CE)**

This paper aims to highlight the dynamics of Getic settlements situated in the area between the river Olt, the Danube, the river Ramnicu Sarat, and the Subcarpathians, during the 4th century BCE and the 1st century CE. The period is presented in three major chronological phases, set according to the evolution of the settlements. The current stage of research is presented here, as well as the making of a list of known Getic settlements, and a separate list of Getic finds, with a critical view of similar previous approaches, and the creation of the maps of their locations. The presentation also aims to classify the settlements and to establish the possible relations between them, taking into account their nature and terrain layout, as well as highlighting the concentrations of settlements in different areas. The questions that arise from this analysis are related to the causes which led to the appearance of settlements in these areas, and their subsequent abandonment, and the possible correlation of archaeological data with known historical events.

ANJA BERTOL

The Mazin Hoard

The Mazin hoard was discovered in 1896, and today it is kept, almost in its entirety, in the Archaeological Museum in Zagreb. The greater part of the Mazin hoard material consists of *aes formatum*, followed in quantity by *aes rude*, *aes signatum*, *aes grave* and asses. There is also a large number of Carthaginian, Numidian and Egyptian coins, Greek, Romano-Campanian and other Italian coins. Apart from the currency, the remaining part of the hoard consists of several fragments of certain decorative objects and jewellery. So far 11 hoards scattered across the Japodic and Liburnian territory, consisting of similar numismatic assemblage as the one from Mazin, have been documented. This notable horizon of hoards is named the Mazin-type hoards. The first Mazin hoard material was published by J. Brunšmid in 1896. This was followed by three supplements published in 1899/1900, 1902 and 1905 respectively. Numerous authors have mentioned this important hoard in their publications, but a synthesis of the Mazin hoard will be presented for the first time in this paper.

SILVIA BETINELLI

Nemesis in the Roman East

In her prevalence across the Roman world, Nemesis, the Greek goddess of vengeance, assumed different meanings and functions: some of these were common to Greek and Roman cultures, but it is possible to recognize an aspect typically Roman. Based on Greek and Latin texts, the role of Nemesis can be defined as that of punishment of frivolous pride and ostentation. In both Greek and Roman worlds, the goddess was represented in her typical gesture of *spuere in sinum*, which demonstrated the right display of modesty, as well as having an educational purpose. During the Empire, Nemesis became a symbol of Roman power and was perceived as a protector of gladiators and *venatores*, and was worshipped inside amphitheatres.

The aim of my PhD is to highlight the cult of Nemesis in the Roman Orient, with special focus on the ancient theatres and stadia that, from the early to the late Empire, had been modified according to the demands of Roman games. Nemesis assumed the title of guarantor of justice and punisher of unfair behaviour inside the agonal context, Greek and Roman. After some specific studies on the worship of Nemesis in amphitheatres, a new light can be shed on the study of the Roman East, with regard to the presence of the goddess in new or renewed buildings.

By collecting and analyzing all the archaeological, epigraphic and artistic data related to the goddess and to the games (e.g. the reliefs of Ares, Nike and Nemesis at Philippi; the Nemeseum in the theatre of Stobi; the mention of a Neikonemeseum at Ephesus, and all the dedications from gladiators and athletes), my aim is to describe how Roman power was received in the East where an ancient tradition found itself involved in a radical process of change.

BRUNO BIJAĐIJA**Roman Architecture in Konavle**

During Roman times, Konavle was under the territory of the Roman colony of Epidaurus. Cavtat, the western part of Konavle, was the urban center of the colony, and as such, it deserves special attention in the study of Roman architecture. The fertile field of Konavle played an exceptionally important role in the economic activities of the colony Epidaurus. The field is situated in between the northern (the mountain) and southern (the sea side) hills. The remains of Roman architecture have been documented on both hills. By using the information from historical records and archives, as well as the relevant scientific literature, and by comparing them with the situation on site, the goal was to produce a picture of Konavle during the Roman period, as accurately as possible. The main outlines of my presentation are the contrasted relationships between the urban and rural areas, and the countryside villas and the water-supply and road systems.

IMOLA BODA**The Sacred Topography of Colonia Sarmizegetusa**

The rituals performed during the foundation of a Roman city prove that a prescribed set of regulations had been in place. Location, orientation, and scenography translated into acts, gestures and processions of sacred character; these were expressions of geographic symbolism of the religious type.

After the foundation of Sarmizegetusa, after officiating the appropriate rituals and laying out the main roads from the *locus gromae*, the first *forum* of the *colonia* was built: *Trajan's Forum*, or *Forum Vetus*. Later on, during the reign of Antoninus Pius, the *Forum Novum* was built (approx. 150 BCE), with the *Capitolium* on its western side, thus becoming a religious forum.

Apart from this aspect, Sarmizegetusa's sacred topography implies the existence of a ritual complex around the *Asklepieion*, which was itself included in the *area sacra* (in the northern part of the Roman precinct, surrounded by a *temenos*) where the Greco-Roman temples were situated, surrounding the *Ara Augusti*. Apart from the *Forum Vetus*, these were the first sacred buildings in Sarmizegetusa. The second *area sacra* was situated in the *domus procuratoris*, with divinities of different origins. However, the erection of a sanctuary for an Egyptian divinity was possible (in this case), but only during the reign of Caracalla. The Oriental temples (*Dii patrii* palmyreni, Mithras, Iuppiter Dolichenus) do not seem to have a nucleus, and therefore they do not seem to have a sacred area, being very scattered. In turn, we may state that these temples were built only on the southern and south-western sides of the Roman precinct.

Subsequently, after some Roman emperors started to show support for Oriental cults, these became part of the official Roman religion, and temples were erected both

inside the Roman precinct at Sarmizegetusa, and near traditional temples (as it was emphasized in the case of Malagbel, Isis and Caelestis Virgo).

JAN BULAS

The Invasion of the Vandals - Cultural Changes During the Roman Period in the Upper Tisza Region. An Archaeological and Historical Perspective

This presentation illustrates the cultural contribution of the Przeworsk culture population in the Upper Tisza Region during the late second century CE. Any evaluation of the archaeological material excavated in the Carpathian Basin poses problems for the researcher because it comes from a diverse cultural background. The archaeological material from the Przeworsk culture found in the Upper Tisza region is linked to an event described by Roman historians – the Vandal invasion during the time of Marcomannic Wars.

Archaeological sources present a very complex picture of these events. The arrival of new ethnic groups, of both Germanic and Sarmatian origin, into the pre-existing local environment resulted in the creation of new cultural entities. This phenomenon is difficult to analyze since the archaeological material attributed to these peoples spreads across four modern countries – Slovakia, Ukraine, Hungary and Romania. My research focuses on the chronology of the artefacts belonging to the Hasdingian Vandals, which reveal the migration and adaptation process of this tribe in the Upper Tisza region. It also examines the way Germanic tribes influenced and adapted the local material culture present in the Carpathian Basin during the last decades of second century CE.

EVA BUTINA

The Material Culture of Identity and Memory Construction at the Protestant Center in Govče

In 2011, the partial remains of a church center were excavated at Govče, a remote site near Žalec in NE Slovenia. The uncovered foundations of a circular church, and the traces of a rectangular wall surrounding the adjoining cemetery, confirmed that the site was a Protestant church built by the prominent but minor protestant community living amidst the predominantly catholic population, around 1580. It was later destroyed by the anti-reformation commission in 1600, following a three day trial. By using large quantities of gunpowder, the intent was to obliterate the site and any memory of it.

My research has two objectives: 1) to see how material culture and its practices reflect the identity of the people who built and used the church complex; 2) how these practices formed a tool for the creation of collective memory and memory sites (*lieu de memoires*), with significant insight into the practice of space creation and its use

(construction, movement and interaction in the complex space, the burials, and its destruction).

By using two 19th c. drawings that reconstruct the unusual circular church, the written accounts of the construction of the church (the measurements), and a methodological dissemination of the excavation data from the site, I propose to construct a 3D model of the church center. This would serve as an interpretation tool in order to understand how material culture embodies space and how it interacts with architecture.

RICCARDO CECOVINI

The Territorial Organization Along the Ancient Road Aquileia-Emona in the Early Middle Ages: Crisis and Transformations

This project intends to propose a study of the territorial organization of the eastern Friuli and the Iulian Alps in the Early Middle Ages (6th -9th century).

From the last quarter of the third century, the Eastern Alps went through a process of militarization which created an integrated set of barriers and fortifications at the most vulnerable locations. These were the so-called *Claustra Alpium Iuliarum* mentioned in the historical records. This project aims to determine if and how the Roman defense system of the Eastern Alps was used by those in charge of the region since the end of the fifth century – from the troops of Odoacer to Theodoric's Goths, from the Lombards to the Franks. Given the scarcity of evidence for the existence of the military *Claustra* after the collapse of the Western Roman Empire (enough to state it was not in continuous systematic use for the defense of the Peninsula), this project will focus on whether the new policy of the Italic military framework could defend the eastern gateway in any way. Ultimately, the question is whether the Vipava valley and the Alpine watershed between the Julian Alps and the foothills of the Dinaric Alps in particular, posed an insurmountable political or military barrier for Italian sovereigns. The research will try to see if the defense system of the region relied on the fortresses from the sixth century on. If not, then these fortifications served as shelters where the fleeing population sought refuge. These same sites will also be used to assess the fine line between the ethnic groups which saw major cultural overlaps for several centuries in the area.

LADISLAV CHMELO

Western Influence on Hallstatt Culture in the Northeast Alpine Region

The northeast Alpine region of Hallstatt culture is geographically marked by the borders of current Lower Austria, Burgenland, southern Moravia, south-western Slovakia and Transdanubia. It includes the territory of the Kalenderberg and Horákov cultures, dated approximately between the 8th and 5th century BCE. This paper focuses

on solving the question of western influence in the northeast alpine region. It explores the rate of acceptance and the integration of western elements in the development and representation of Hallstatt culture. It analyzes the chronological and chorological aspects of these relations and places them onto distribution maps. Since the beginning of Early Iron Age foreign elements of culture influence kept appearing in the northeast alpine region. In the funeral context, these were mainly burial graves. The material cultural elements are decorative parts, weaponry, wagons, ceramic vessels and ornamental motives. The communication channel followed the Danube river, a route that was intensely used during the Early Iron Age. It is possible to observe how the western elements were spread from Bavaria, Palatinate and north-eastern Switzerland along this route. They were distributed incrementally along the Danube river to Upper Austria, with a major concentration around the Linz area. The find context from Lower Austria and southern Moravia exhibits strong connections to this region. This is a natural result of their geographical location. These cultural elements were distributed to Lower Austria via the Danube route, concentrated mostly in the valley of the lower stream of the Traisen river.

FLORIN CIULAVU

Archaeological Research Inside the Mint Complex of Alba Iulia, Romania*

A series of important objects used by the mint's artisans to melt metals and mint coins have been discovered in archaeological excavations conducted in several campaigns.

The first archaeological excavation took place in 1953; the campaigns were carried out for about two decades, and one of the main objectives was the *Porta Principalis Dextra* of the Roman fort, whose ruins extended underneath the mint's walls. More recently, in the spring of 2014, several borehole surveys were carried out inside the mint. Their main purpose was to identify the basements which belonged to the mint complex. At this point, almost all the artifacts uncovered during the excavations and the borehole surveys, which are related to the mint and the minting process, remain unpublished.

In this paper, the author presents the research conducted inside the mint, along with some important aforementioned artifacts: a crucible and some crucible fragments, specialized vessels from the mint facilities, spoons used for pouring the melted metal, pliers used for attaching the metal bars and crucibles, etc. The Alba Iulia mint was active during the 17th-19th centuries; the material I am presenting here is from the 17th-18th centuries.

* Research funded by the project "Minerva - Cooperation for elite careers in doctoral and post-doctoral research" code agreement POSDRU/159/1.5/S/137832, project co-financed by the European Social Fund through the Sectoral Operational Programme, Human Resources Development 2007-2013.

PÉTER CZUKOR

A Late Bronze Age Fortified Settlement at Makó-Rákos, Császárvár, and the Research of Its Hinterland

In the area of the Békés-Csanád loess deposits and the Banat region, a series of large fortifications enclosed by ramparts and ditches emerged in the period between 1300–1100 BCE (Rei. BrD–HaA1). These huge structures, often hundreds of hectares large, became the focus of Hungarian and Romanian research only in the past decade. This new type of settlement indicates significant, although largely unknown, social and economic transformations during the last centuries of the 2nd millennium BCE, in the Late Tumulus Grave – Early Urnfield period, throughout Central Europe and the Carpathian Basin.

The best known examples of these monumental fortifications are Orosháza–Nagytatársánc, excavated by János Banner in 1939, and the fortifications in the vicinity of Újszentanna/Sântana and Mezőzsadány/Cornești in the Romanian Banat, which have been recently studied in more detail. Another archaeologically explored fortification is the one in the vicinity of Csanádpalota.

These are surrounded by a series of smaller rural settlements, forming a three-tiered settlement hierarchy, indicating a fairly complex society. The function of these settlements has been debated to some degree, as they have not yet yielded substantial domestic remains, and interpretations of them as *refugia* or ritual centres are also possible.

My paper summarizes the results of the research, focusing on one of the fortifications, called Makó-Rákos Császárvár. This small fortified site spreading over 42 hectares is explored within the framework of a wider, micro-regional settlement study, and it is interpreted in terms of the socio-political makeup of these Late Bronze Age polities.

LINA DIERS

Identifying Urban Settlements in Roman Moesia: Problems and Possibilities

Some difficulties in identifying and characterising urban settlements can occur while working on the evidence from the Roman province of Moesia. Compared to the other provinces of the Roman Empire, the archaeological and epigraphic evidence for the term city is rare and quite specific.

Founded in AD 15 and divided into Moesia Superior and Moesia Inferior under Emperor Domitian, Moesia was one of the less densely populated regions of the Roman Empire. In addition, no attested settlement has been fully excavated so far. Due to this fact, Moesian urban settlements often lack features one would expect to find in a typical Roman city. Also, sometimes we are faced with a lack of sources that would attest to the urban character or legal status of a settlement. This has led to the following situation: on the one hand, we have settlements that are not named as *municipia* or *coloniae*, but

they might have been of urban character; and on the other hand, there are *municipia* and *coloniae* with no archaeological finds to confirm that status. Furthermore, there is the problem of separating civil from military settlements or spheres in Moesia. In more than one case, archaeological and/or epigraphic evidence paints a picture of two or more settlement structures (legionary forts, *municipia*, *canabae*, etc.) present at one site. How can we thus apply the term city or urban settlement considering the situation in Moesia? What strategies can we find to ensure the legitimate use of these terms?

This paper will try to answer these questions by discussing examples from both Moesia Superior and Moesia Inferior, thus making a contribution to the author's PhD study under the working title *The Roman Province of Moesia. Comparative Studies on the Formation of Cultural Spaces in Moesia Superior and Moesia Inferior during the First Three Centuries CE*.

Laura-Simona Draşovean

Casting the Stone: Lithic Variability in the Neolithic of the Romanian Banat Region

This project presents a cultural comparison between the Early, Middle and Late Neolithic chipped stone assemblages in the Romanian Banat, centering on the technological and typological analysis of the available material, in order to produce new information concerning how chipped stone tools were produced by the Neolithic people from the various sites situated in the Banat region. The data was subjected to complex statistical analysis in order to have a clear view of the temporal sequences, the technology involved in making these implements, and the cultural, chronological and economical relations with similar sites in the region. These sites range chronologically from around 6459- 6246 calBCE (combined dates, Draşovean 2003:45) to 4690- 4551 calBCE (IPTCE 2008), being associated with the Starčevo-Criş, Vinča, Foeni Group and the Banat cultures.

The results so far show that the raw material is predominantly presumed to be of local origin, with imported materials like Balkan flint, Prut flint and obsidian ranging in numbers throughout time. As far as technology is concerned, we can now see that throughout the Neolithic, direct percussion with both hard and soft hammers was the main method of débitage, and most of the knapping was done on site during the Early and Middle Neolithic, and changing later on. As far as typology is concerned, characteristic of all the Neolithic layers are end scrapers and sickle implements, in accordance with the theories proposed thus far. The presence of a peripheral eastern group in the Banat region, characterized by retouched truncations, geometric microliths and backed and angulated back implements that might influence the microlithism specific for the late stages of the Vinča culture, has not been established so far. The Banat culture fits into the general tendencies of the Late Neolithic assemblages, which were unknown prior to this analysis.

TOMASZ DZIURDZIK

Roman Military Headquarters: Religious Ceremonies and the Use of Space

The Roman Imperial army held numerous cult ceremonies and sacrifices, important for being the means of maintaining proper relationships with the gods. It is also widely assumed that religious festivals facilitated the process of Romanization for soldiers, and strengthened the esprit de corps in the units. Most ceremonies also had a political and ideological context, promoting loyalty to the ruling dynasty and the state.

Most ceremonies were held in the *principia* (headquarters buildings) of the camps and forts. These military installations were a truly imposing setting, similar to or even exceeding civilian sanctuaries. However, the layout and furnishing of military headquarters was not optimized for such use, rather they were designed for multiple, wide-ranging purposes.

This paper aims to consider several key issues related to the use of space in those buildings. Of special importance is whether mass participation was possible, and what was the rank-and-file soldiers' visual experience. Bearing in mind the architectural and spatial framework, a reconstruction of the extent of participation in ceremonies is crucial for the understanding of the impact of official army religion on military personnel.

ANA ĐURIČIĆ

VINČA CULTURE OVENS – FROM CINNABARITE TO BREAD: A REVIEW OF THE INTERPRETATIONS AND THE ROLE OF ETHNOLOGY IN ARCHAEOLOGICAL STUDIES

Ovens have often been neglected in the archaeological documentation and publications. In most cases, only their existence or absence at a site is confirmed, and sometimes the number of floorings can be presented, since parts of their upper structure are rarely preserved in an archaeological context. Luckily, during the first excavation seasons at the site of Vinča – Belo Brdo, a number of well-preserved ovens were found. Interpretations have changed from M. Vasić until now, but those ovens remain referential, and later authors use them as analogies for other Late Neolithic ovens from the Central Balkans. Nevertheless, their construction techniques have not been questioned often, since those processes are considered to be well-known, and archaeologists feel no need to examine or test them. However, the question is what exactly and how much do we actually know about ovens? Do all ovens look like the ones found at the site of Vinča at the beginning of the 20th century? When can ethnology be useful and when can it offer no help or even be misleading? Using the archaeological record, former interpretations of oven functions, and ethnological data, a review about our current knowledge on ovens from the territory of the Central Balkans will be presented.

ISTVÁN GERGŐ FARKAS

Revisited: 3D Epigraphy and an Old-New Roman Milestone from Pécs

In 1939, two Roman milestones were discovered during foundation works in downtown Pécs (Baranya county, Hungary), set up there during the reigns of Emperors Gordian III (238-244) and Tacitus (275-276), respectively. Both stones were donated to the local Archaeological Museum (JPM), but only the latter's inscription was published. Curiously, the corresponding archaeologist, F. Fülep, recorded the Gordianic milestone's text in the museum's inventory, but with an impossible numeral for the emperor's *tribunicia potestas*, which calls his entire reading into question.

Although the stone's surface underwent severe deterioration in the past decade due to the elements, the author recorded what remained legible of the letters (this is the first ever published drawing of this inscription), and proposed a new reading in accordance with the presently accepted imperial *titulature* of Emperor Gordian III.

ÁGOTA FERENCZ-MÁTÉFI

Preliminary Results of the Study of Roman and Late Roman Pottery from Környe, Hungary

This presentation aims to discuss the problems in research regarding the pottery material of Környe. The research offers clues how the methodology should be worked out. Afterwards, the typology of pottery will be presented.

Three key pieces of information come from the pottery material, all of them having specific issues. The first layer of pottery was found during modern construction work and the early stages of archaeological excavation, and it has been lost until today.

The second layer, also the largest, was uncovered in the excavations of 2002, and it mostly consists of the material used in planishing work in the late Roman fort. The importance of this material lies in the fact that it can be used to date the layer to the earliest stages of the late Roman fort, when it was being erected. Furthermore, the layer contains pottery from the Roman settlement which had been destroyed during the construction of the late Roman fort. This makes it one of the richest sources of information we have concerning the Roman settlement.

The third piece of information comes from a series of pottery kilns containing half-made vessels, uncovered during the latest excavation season. This rare and important find is concrete evidence of local pottery production that also shows the range of the manufacture process.

The pottery material of Környe – in this current phase of the research – seems to be a mixture of Late Roman and classical provincial pottery. Many categories and types are represented, including some unique local products. These are also present in the pottery material of Brigetio and four other inner Pannonian fortifications in Valeria, used as reference points for the Környe material.

MATEJA HULINA

Lipid Residue Analysis of Neolithic Pottery from Eastern Croatia

Analysis of organic residue from pottery is a fairly new method in archaeology, developed during the last 20-30 years (Evershed 2008; Barker 2012; Greg 2009). It can uncover substances preserved in ceramic matrices that would otherwise remain hidden. The most common of these substances are lipids – a group of molecules found in animal and vegetable fats and oils. They can answer questions about what was cooked, prepared or kept in pots, and by extension, what were the dietary habits of archaeological populations. Furthermore, they give us data about the function of certain pottery types. So far, these analyses have discovered a wide range of substances such as animal and dairy fats, vegetable oils, marine animal oils, resins, plant waxes or beeswax in various pottery types from all archaeological periods.

This paper presents the preliminary results of lipid residue analysis of pottery from Neolithic sites in eastern Croatia. Samples were chosen according to their availability and shape, and the vessel area (different parts, shapes and fabrics were selected), the lipids were extracted using the acid extraction method and analyzed by gas chromatography – mass spectrometry. The results (in OpenChrom) show preserved lipids in several samples, most likely of animal origin. Further analysis (GC-C-IRMS) is required to confirm the lipid origin in more detail. Since the material from Croatia has very rarely been analyzed in such a manner, these results give us greater insight into pottery use and the diet of our Neolithic archaeological populations.

DORA IVANIŠEVIĆ

The Cost of Sarcophagi in Salona in Late Antiquity

The Roman practice of setting up inscribed funerary monuments was socially and culturally contingent, and the direct correlation between the “epitaph population”, or the people who could afford them, and the makeup of urban society is untenable. Still, the cost of a funerary monument with or without an inscription, the primary eliminating factor which made this type of commemoration unattainable to the majority of the population, remains largely uncovered in scientific literature. As for late Roman, i.e. Christian epitaphs, scholars (Shaw 1996; Galvão-Sobrinho 1995) seem to think that the commemoration tradition went further down the social scale.

Evidence of the cost of erecting an inscribed funerary monument during Late Antiquity is generally scarce. Nevertheless, five inscribed sarcophagi from Salona and its surroundings (*ager Salonitanus*), dated to Late Antiquity, provide information about the price.

This paper aims to discuss the cost of sarcophagi from Salona in Late Antiquity, taking into account the social status of the deceased, and the persons who commemorated the sarcophagi with and without the recorded price. The goal is to get a sense of the cost of funerary monuments and gain insight into the extent of their availability.

SZYMON JELLONEK

Caligula's Coins as Evidence of *Imitatio Augusti*

Gaius was the great-grandson of Augustus which was crucial for his rule as Emperor Caligula. After the death of Tiberius, the predominant sentiment was that a new golden age would come, with Caligula, the descendant of *Divus Augustus*, adopting the Augustan policy (*Imitatio Augusti*). Affluence and peace would surely return after the reign of the unpopular Tiberius had ended. The senators, the aristocracy, and the people believed that the new emperor would embody the best qualities of his great-grandfather, as did Gaius himself. Caligula's propaganda was heavily reliant on Augustus. Evidence of Caligula imitating his divine ancestor can be found on coinage. One of the first coins minted during Caligula's reign was the *aureus* with the young emperor's portrait on the obverse, and the radiate head of *Divus Augustus* with two stars on the reverse (RIC 1). A similar example was the *denarius* (RIC 18) with the image of Augustus enclosed by the legend DIVVS AVGVSTVS PATER PATRIAE. These two examples portray Augustus as the most important role model. Many other indirect links to Augustan policy can be found on imperial and provincial coinage, such as the portraits of family members or the symbols of Augustan propaganda.

JELENA JOVANOVIĆ

Core-Formed Glass Vessels from the Archaeological Museum in Split

Core-forming is one of the earliest glassmaking techniques found in both northern Mesopotamia and Syria during the mid-second millennium BCE. Core-formed glass vessels were produced in the Mediterranean area between the sixth and the first century BCE. The permanent collection of the Archaeological Museum in Split holds 3 core-formed vessels which are part of the so-called old inventory. Where they came from or how they were obtained by the Museum remains unknown. Two amphoriskoi were found in Salona and one alabastron is from an unidentified site in Dalmatia. All the vessels belong to the Mediterranean Group III, dated between the second century BCE and the early first century CE.

PALMA KARKOVIĆ TAKALIĆ

Some Considerations on the Iconographic Characteristics of the Isiac Monuments from Salona

The role of iconographic analysis in the research of Antiquity cults will be discussed here on the examples of Isiac monuments from Salona. This topic is part of my PhD thesis titled *The Development of Mystery Cults in the Roman Province of Dalmatia*.

An overview of the Isiac monuments from the Salona area will be presented. The elements of their iconography are defined and compared to the data from written sources, other monuments from the Roman Empire, and the results of recent research methodology used in the area.

The iconographic method is used to precisely define the individual iconographic variants, the types, and the use of monuments in Salona. This approach will help define the specific circumstances of the origin of single monuments, meaning it will try to identify the person who commissioned the monument, and possibly establish their origin, status and other details. The aim of this approach, along with the formal, epigraphic and onomastic analyses, is to contribute to the research of the development of Isiac cults during the Roman period in Salona.

JULIA KOCH

Phrygian Doorstones in Roman Dalmatia and Northern Anatolia. Bridging the Gap.

During the Pax Romana, funerary doorstones appeared in the Roman Phrygia and Northern Galatia, near newly founded cities, as prestigious grave markers of the newly emerging urban elite. Monuments with elaborate façades, constructed doorstones and monolithic door stelai were erected in large numbers during the prosperous High Imperial Period of the second and third century CE, as indicated by Marc Waelkens in the 1980s with his assemblage of hitherto known funerary monuments with door façades. Northern Anatolian archaeology has produced new evidence of the spread of Phrygian doorstones across Inner Paphlagonia and the Pontos region, and this paper will present new graveside emblems from the rural hinterlands of the Southern Black Sea Coast. For example, the importance of farming and viticulture in the fertile valley of the Amnias River is largely testified by a highly symbolic visual language of funerary doorstones erected by the civilians of the Paphlagonian metropolis Pompeiopolis. In contrast, the Dalmatian doorstones commemorated soldiers of the seventh legion who were garrisoned at the Roman military camps of Tilurium, Bigeste and Salona, at the very beginning of the Early Imperial Period. Since the preserved Dalmatian grave stelae are one of the earliest doorstones in the *Imperium Romanum*, their origin and meaning will be discussed while taking into account the pre-Roman predecessors from Hellenistic Paphlagonia.

ELENA LEGHISSA

The Pile Dwellings near Ig (Ljubljansko barje, Slovenia): A New View of Ceramic Finds

The pile dwellings at Ig were discovered in 1875 while the trenches alongside the Ižanska street were being cleaned. The excavations were conducted by Karl Desch-

mann in three seasons between 1875 and 1877. Deschmann discovered three different pile dwellings, which are known in literature today as Deschmann pile dwellings I, II and III. The finds from the excavations – pottery with rich decoration, bone and stone artefacts, all mostly dated to the third millennium BCE – were published by Paola and Josip Korošec in 1969. A revision of the ceramic material, kept at the National Museum of Slovenia in Ljubljana, was undertaken as part of my doctoral thesis. This included a re-examination of all ceramic finds and their new catalogue description. In addition, the conservation status of the material was also evaluated. Furthermore, a thorough overview of the drawings made in 1969 was done, and all the objects were photographed. In this presentation I intend to show the preliminary results of this new analysis of ceramic finds, and the revision of the documentation from the excavations. Special focus will be given to the different ceramic decoration techniques, as well as the problems encountered while trying to assign different vessels to particular excavation areas.

NÁNDOR LEHRER

Inter-Municipal Connections in the Roman Empire. A Theoretical and Methodological Survey

Researching the connection between the colonies of the Roman Empire is a modern theme. The analysis of inter-municipal connections is prevalent in historical research, however, it is an unconventional method in ancient historical writing. A lot of theories have been born, which aimed to analyze or rather chart the connections and relations between cities. These types of studies are needed for a better understanding of the complexity of the Roman Empire's city network. The research cannot be complete without analyzing the extant theories on this topic. Using models is necessary because they give a conceptual framework for the scholar to work with.

Modern villages have largely been the focus of the research of economic and societal affiliations between settlements, which gained momentum during the second half of the last century. Scholars of classical studies have a fairly bigger concern because statistical or demographical data are rarely available to them. We have to build up our data on the basis of narrative and archaeological sources. Here the main narrative sources are the works of Titus Livius and Strabo. Excavated inscriptions represent the other half of sources. The subject of this analysis is a North Italian city called Aquileia that became part of the Roman city network in the second century BCE.

In my presentation I am going to lay out the extant theories and show how literary sources and archaeological sources present the relations between Aquileia and other cities. The main focus is going to be the theoretical and methodological analysis, and how these theories can be applied to our topic, if they are applicable at all.

MICHAŁ LINK-LENCZOWSKI

Clay Tobacco Pipes from Kazimierz, Kraków

The aim of this paper is to present a specific category of finds recovered during the excavation campaign held in the spring and summer of 2012, in a Jewish district in Kraków. During the excavation, about 70 pipes and their fragments were uncovered. This is probably the biggest collection of this type of artefact ever found in Poland. The pipes from Kazimierz show many similarities to the finds from other parts of Poland, as well as from Slovakia, the Czech Republic, Austria, Hungary and the Balkans. An in-depth analysis of the material will show the methods of production, decoration and, most importantly, the chronology of the aforementioned artefacts.

ZUZANA LITVIAKOVÁ

A Fortified Settlement from the Early Bronze Age in Hoste (SW Slovakia) – New Results and Perspectives

In south-western Slovakia, the end of the Early Bronze Age was marked by the appearance of fortified settlements of the cultural complex Maďarovce - Věteřov - Bóheimkirchen. The main aim of this thesis is to analyse the fortified settlement near the village Hoste, situated on a loess dune in the inundated area of the river Dudváh. Part of the research is focused on environmental factors that influence spatial organization and the use of residential areas as well as their surroundings. The analysis of the chronological placement during the development of the Bronze Age is based on the material which comes from previous excavations. The purpose is to explore whether the site represents a characteristic settlement of the Maďarovce culture or if there is continuity until the beginning of the Middle Bronze Age. Therefore, a comparison with similar sites from the same period is necessary, however settlement patterns in this region have not been well documented. Consequently, the exploration of Bronze Age residential and burial areas from the adjacent villages of Majcichov, Križovany nad Dudváhom, has been included in this thesis. The review of the settlement evidence provides insight into how society transformed over a period of time.

DUNJA MARTIĆ

Mujina pećina – Preliminary Use-Wear Analysis

A preliminary analysis was performed in order to determine if the finds from Mujina pećina are suitable for use-wear analysis. The lithic material was examined using a magnifying glass and the naked eye. Twelve fragments were separated, all bearing distinct markings from knapping. A macroscopic analysis followed, under a metallurgical

microscope at the magnification of 23x. Although patina is extensive on the majority of findings, one artefact, out of the twelve, shows distinct shine which indicates the possibility of future analysis. Based on this, the preliminary use-wear analysis will continue to include a larger variety of fragments.

A new method of illumination for the metallurgical microscope was tested. Instead of using the direct light built in the microscope, four ring-bearing lights were placed around the lens. The sample was illuminated with one or more lights. This method allows the surface of the lithic tool to be observed under different lighting, without changing the angle of the artefact under the lens. The shadows that form under such light facilitate the examination of the tool surface, making it more precise and comprehensive, unlike the analysis of the entire sample illuminated equally under direct light.

Since the majority of lithic finds from Mujina pećina are covered in patina, a standardisation of it was made. The patina was divided into 2 major groups – the real patina that represents a chemical change in the structure of the flint, and the sedimentation patina that represents the calcification of the flint surface. Real patina can vary depending on the quality of the flint.

TONKA MATANA

A Review of the Current State in the Research of Early Medieval Dubrovnik

This presentation will deal with the representation of Dubrovnik in previous scientific work, with a focus on the early medieval period. An overview of the current state of research will be given.

Dubrovnik, together with its wider territory, still remains one of the least archaeologically explored regions in Croatia. Occasional research has been conducted over the years, but of limited scope. Nevertheless, some progress has been achieved in recent years, and the results of these recent studies have offered expectedly interesting insights.

In contrast with the periods of prehistory and antiquity, the early medieval period in Dubrovnik has noticeably the most material evidence preserved. Scientific publications mainly focus on the architectural remains from the pre-Romanesque period, variously dated, mostly between 9th-11th centuries.

Among the discovered and researched architectural material, the remains of structures from the early Christian period, although few in number, have been identified and documented. Explored pre-Romanesque churches are mostly not preserved in their authentic form and they usually contain only sporadic traces of their original appearance, with fragments of decorated church furniture. Thus far, the discovered fragments have been analyzed and published.

Of all the documented structures, certainly the assumed Byzantine basilica drew most of the attention and publicity. The basilica remains have been discovered under the foundations of the present Dubrovnik Cathedral. Due to the difficulties of precise

dating, it still remains the subject of numerous studies, scientific debates and various interpretations.

ANA MIKULKA

The Anthropological Analysis of Osteological Remains from the Archaeological Site of the Church of Our Lady of the Mountain in Lobar (Croatia)

The goal of this research is to conduct an anthropological analysis of the osteological remains from the modern period and help expand the historical and social issues of the Lobar site in general.

The extensive anthropological analysis covers about a hundred graves from the modern period that represent a closed population sample. The analysis of musculo-skeletal stress markers, together with the pathological changes and cumulative trauma visible on the skeletal remains, helps to ascertain the quality of the living conditions, which will expand the socio-cultural analysis. Moreover, the introduction of a chemical analysis, the stable isotope analysis (C, N, O), provides new insight into the reconstruction of dietary habits and nutrition in this period. Paleodemographic studies, a calculation of prehistoric human population structures, provide data on life expectancy, age-specific mortality rates, and general health and well-being indicators. These are useful in the overall archaeological reconstruction of the era. The two methods are rarely implemented on this sample type in Croatia.

The aim is to draw general biocultural conclusions for the population from this data. Some preliminary analyses have already been done, together with a chemical analysis. We hope that the analysis of a larger population sample will expand our previous understanding of the daily activities, occupations, disease susceptibility, geographic origin and migration patterns of this archaeological population, and the environmental conditions in which they lived.

MIRO NAĐ

Coin Circulation in the Southern Part of Pannonia Superior from AD 193 to the Cessation of Regular Coin Supply to the Region – the Methodology

Interest in the study of Roman coin circulation has increased significantly over the past few decades. This phenomenon resulted in several key works which have laid the foundations for this field of study, as well as other numerous articles that have partially dealt with specific topics within the larger field concerning the circulation of Roman coins. The aim of this paper is to compare the existing scientific approaches and methods of analysis of coin circulation which could be applied to the numismatic material from the southern part of Pannonia Superior. The analysis of the methods will take into

account the characteristics of the numismatic material (site finds, hoards, grave finds), the time frame of the circulation, and any objective obstacles in the development of the methodological framework. Special attention will be paid to the maximum expansion of available data for enhanced analysis and interpretation. The analysis should develop a method of analyzing trends in the circulation of Roman coins in the southern part of Upper Pannonia, adaptable to a specific spatio-temporal framework, and suitable for comparison with the examined adjacent regions of the Roman Empire.

SZABOLCS NAGY

The Castles of Várpalota and Ilok: Concurrent Building Activities of Nicholas of Ilok?

A few years after the death of King Wladislaus I (1440-1444) John of Hunyad and Nicholas of Ilok became the two most influential barons of the Hungarian Kingdom. Nicholas could behave as an oligarch in the western part of the kingdom, and he seemingly tried to establish a political authority resembling a separate principality. The castle of Várpalota (Hungary) was the legacy of these ambitions. The main residence of the baronial family had been in Ilok (Croatia) since the fourteenth century but concurrently they also had a manor house in Várpalota. During the 1440s, the former manor house was transformed into a spectacular castle which was probably meant to take over the place of Ilok as the seat of territorial authority. When the baron's political efforts failed in the 1450s, Várpalota became a less significant local residence once more. Nevertheless, a survey of the carved stone fragments seems to confirm a significant construction period in the castle area during the second half of the century – a period when the dominance of Ilok and its surrounding estates was again unquestionable. Archaeological research confirms that the two castles had much in common, like the environment where they were built, the general layout or the minor architectural details. The comparison of Várpalota, Ilok and other contemporaneous elite residences, as well as the question of concurrent building activities, may reveal some characteristic features of prestige representation and the display of power in the fifteenth century.

LUCIANA NEDELEA

Paleodermatoglyphics and the Roman Fort Potaissa. Documentation of Ancient Fingerprints and Analysis of Roman Pottery

The arrival of a new military force, the *Legio Quinta Macedonica*, at Potaissa influenced all aspects of Roman daily life, at the economic, social and cultural level, which also meant a bigger demand for pottery. As a result, the production of local ware was increased, and Potaissa is recognized amongst specialists as an important producti-

on center, known for its variety of ware produced by local potters. For this particular study, over 3000 pottery shards have been analyzed, documented and registered for the History Museum in Turda (all new, unpublished material), and after an in-depth analysis of the archaeological material, a very interesting feature emerged, occurring mostly on clay artifacts: fingerprints. The study of ancient fingerprints is rarely applied, due to the fact that it is an unknown technique and in most cases fingerprints can be easily overlooked. One of the major goals of this study was to expand the knowledge of fingerprint analysis amongst archaeologists and discuss its importance in the field of archaeology. The study of fingerprints can successfully determine the age and sex of potters and also approximate how many were active in the workshops. From the 3000 shards that have been analyzed, 30% of them bear fingerprints which show that the majority of these artifacts were created by male adults (age group 25-30), which is very important if we compare this to other studies (few in number) conducted on Neolithic or Bronze Age pottery. This study also gave insight into the import of *terra sigillata* and the production of local imitations.

RÉKA NEMÉNYI – CSABA SZABÓ

The Missing Community - A Revision of the So-Called „Early Christian” Artifacts from Apulum and Its Territory

The study of Early Christianity in the Roman provinces is now focused on the revision of chronology and on the iconographic aspects of numerous artifacts identified as “Christian” in older scientific literature. The new approach to the discipline also redefined the study of Early Christianity by introducing new methods borrowed from Roman religious studies and cognitive archaeology. In view of this, a reinterpretation of early Christian artifacts from the Roman province of Dacia (106-271) is highly necessary and vital for the academic community.

In this study, the authors will present a short history of Romanian scientific work on Early Christianity by reinterpreting the archaeological material from the Roman conurbation of Apulum from the 2nd – 8th century.

MICHAELA NIKLOVÁ

Perspectives on Household Archaeology in Slovakia

Household Archaeology has existed abroad as an independent research trend for nearly three decades. It was created, defined and applied mainly in the United States and in Great Britain. Household archaeology includes mainly the research of household activities and processes of social formation focused on the basic assumptions of social life. It means that the object of research is the household as a social unit,

the dwellings and other settlement structures, the material remains and other issues connected to a particular archaeological culture. It is also concerned with the study of activities taking place at the settlement and the behavior of people who were living there in particular time period. Researchers are increasingly devoted to this issue in continental Europe as well, however, new approaches in the investigation of settlements of prehistoric communities have so far rarely been used in Slovakia. Since issues of the everyday life of prehistoric communities have not been solved in Slovakian archaeological research, namely new approaches in examining not only the settlement finds (artifacts and non-portable remains), but also the whole background (economic, sacral, etc.) have not been applied, I will try to define the prospect of applying household archaeology as a research trend to selected prehistoric cultures from Slovakia.

One of the problems is that we cannot interpret the household, its function and its organization, from the dwellings directly, or from other material remains uncovered during the excavations. But there is hope that the environment, household demography, organization and activity are linked together to material culture, and as we learn more about these links, it will be possible to apply them to the study of the past. Then, by working in archaeology and other scientific disciplines, we will be able to build more complete models of past life. As a result, we will be able to understand society's most basic unit - the household.

KAMILA NOCOŇ

Casseroles, Frying Pans, Cooking Pots. Cooking Utensils from the Hellenistic Period from the Paphos Agora

The aim of the paper is to discuss the results from the excavation conducted by the Institute of Archaeology, Jagiellonian University (Kraków), at the Paphos Agora site, ongoing since 2011. The core of the paper is to present a preliminary study of cooking ware from the Hellenistic period, excavated during the 2011-2014 seasons. In this paper I want to briefly examine the most popular shapes of cooking ware (casseroles, cooking pots, frying pans, jugs), as well as set up a chronology for them.

JADWIGA OLBROT

Heating Devices in Medieval Monasteries in Poland

In the presentation I will introduce the problematic aspects of stoves of the hypocaust type. The main aim of this study will be to present the origin and development of these heating devices in Polish monasteries. The oldest known hypocaust stove was built in the 13th cent. for the Cistercian order – here I will consider the issue at hand. My study will cover the medieval period as well as the modern period, up to the 17th cent.

I would also like to discuss how hypocaust stoves influenced heating on other sites in Poland.

First, I would like to present some facts about the hypocaust. Then I will discuss its origins – how and when it came to Poland, and for what reason. Next I will show how it looked and worked, referencing existing examples.

Secondly, I will discuss how hypocaust stoves influenced the heating system in this area of Poland. I will analyze tiled stoves and hypocaust stoves. My study will include various sites: castles, manors, town houses, monasteries. I will give examples for every type of site.

The last problem to be examined is the concomitance of different types of heating systems in monasteries. I will try to give an answer for this – is it possible to use tiled stoves, hypocaust stoves and other types of devices in the same building? I will give examples from architectural research and the archeological excavations at the area of the Dominican Order in Kraków.

Finally, I will discuss when and why did the use of hypocaust stoves cease.

IOAN OPREA

Bone Working in Apulum, Dacia Superior

Over the past few decades, more and more studies have been trying to show how bone and antler handicraft was not just a simple domestic activity in the Roman period, but an industry, and archaeological research keeps confirming this in every new excavation.

The Roman site of Apulum has a unique situation, not just in Dacia, but in all Empire. Due to the protection of *Legio XIII Gemina*, two cities prospered for nearly two centuries, *Colonia Aurelia Apulensis* and *Municipium Septimium Apulense*. From a research point of view, this is the best place to look for clues about bone handicraft in this province, because so far five workshops were found in the area. By analyzing their position, we are trying to observe the internal organization of workshops in urban settlements, the character of the clientele, the products they preferred, and how large was the production of tools and ornaments from bone and antler. Apulum has more than 1000 artifacts from bone, antler and ivory, the biggest collection in Dacia. This industry reveals many other aspects of economic and daily life, and the civil and military activities in Apulum.

ANNAMÁRIA–IZABELLA PÁZSINT

The Private Associations of the Greco-Roman World: An Architectural Approach

The main goal of this paper is to provide an overview of the buildings and architectural elements linked to the private (and voluntary) associations of the Greco-Roman world. The paper provides information concerning the meeting places of these associations, the adjacent architectural constructions (i.e. the baths), the decorative elements associated with them (i.e. the mosaics), etc. It also provides insight into the renovation works carried out for their benefit. Even though references to cult buildings, or buildings offered to certain divinities, are prevalent, they are not discussed in this paper mostly because they are well explored and familiar. The main geographical areas which provide the relevant information are Egypt (mainly), Ionia, the Southern Islands, the Danube and the Black Sea area, and the representative period spans roughly between the 2nd century BCE and the 3rd century CE.

The evidence comes from two main academic disciplines: archaeology and epigraphy. Archaeological finds are rather insufficient, but epigraphic data compensates for this and the paper is mostly based on inscriptions. Besides the quantitative approach, the paper also provides a qualitative overview, contributing to the understanding of private associations.

JONA PETEŠIĆ

Saint John in the Nature Park Telašćica

The history of Dugi otok spans for thousands of years, and the fact that it was inhabited from the earliest times can be testified by the finds scattered all over the island.

Dugi otok was first mentioned in mid-10th century by the Byzantine Emperor Constantine Porphyrogenitus, who in his *De administrando imperio* calls it Pizuh. At the beginning of the 11th century, the island was mentioned as *Insula Tilagus* in the historical records, and a variation of this name has been preserved until today in the form of Telašćica - the name of a bay. The island received its current name in the 15th century.

The Church of St. John – the small sacral object was built on the borders of the Stivanje field. Historical records mention it as *Cella Sancti Iohannis*.

As the number of residents in Tilago increased, and the former Church of St. Victor on Citorij became too small, a bigger one was built on the north-eastern edge of Stivanje field. It was erected in 1064 by the nobleman Grubina from Zadar, and he donated it to the monastery of St Grisogonus in Zadar.

It is likely that the church, as well as the majority of pre-Romanesque monuments in the Telašćica bay, were built on top of Roman ruins, and the name CELLA (in historical records) – standing for a small monastery - indicates that other facilities stood next to the church, like a foyer whose significant ruins have been found, as well as the ruins of a building possibly from Late Antiquity.

AURA PICCIONI

Sacra Privata in Archaic Italy

Sacra privata, domestic cults, were widespread during Antiquity, without exception, which means that they were worshipped not only by the Romans, but also by the Etruscans and the ancient Greeks. The archaic period is in central focus here, and we have many examples coming from Massa Marittima, Roselle, Veii, Caere and Murlo in Tuscany; Rome, Acquarossa and Ficana in Latium; and Torre di Satriano, Elea and Conversano in South Italy. These sites, which have similar modes of worship, presuppose a type of *koinè* in the cults and arts.

The central thesis of my PhD is to define the functional indicators that attest the presence of the private cult, and to describe them. Archaeological finds and historical sources are really helpful in achieving these goals. The so-called “palaces”, like the aforementioned Murlo and Acquarossa, are more difficult to analyze. Home of the rich, they served numerous different purposes, from domestic to social and political ones.

Another question is who took part in these *sacra privata*? Some scholars have already discussed this, and also questioned the subdivision of the domestic space and the roles of the men and women there. Also, could slaves have participated in the domestic sacrifice, like the idea of the ancient *familia* would seem to suggest? And what role did the women have? It is also useful to compare different cultures and rituals from the same period, i.e. 6th-5th centuries B.C., in order to better understand expressions of worship before the Roman arrival.

ZRINKA PREMUŽIĆ

Bioarchaeological Analyses of Late Bronze Age Cemeteries in the Southern Carpathian Basin

The Late Bronze Age in central and southern Europe is characterized by the cemeteries of the Urnfield culture. The standard burial rite was cremation on a funeral pyre and deposition of the cremated remains in an urn. Analysis of the human remains yields various types of information. The age and sex of each individual, as well as the present pathological changes, form a demographic profile and the health status of the entire community. Visual characteristics of the bones reveal data on pyre temperature, the positioning of the body, as well as the process of collection and deposition of the remains. The combined results of analyses of human skeletal remains and material finds form an image of the burial practices of a society.

This paper analyses the published studies of human skeletal remains from the Late Bronze Age cemeteries in continental Croatia and the surrounding area. Despite the relatively large number of cemeteries, only a small part of human skeletal material has been analyzed. This situation is present not only in Croatia, but throughout the southern Carpathian Basin.

The majority of studies present only the basic demographic data, namely the sex and age of the deceased. Only a few of them provide some conclusions on pyre characteristics. There is a noticeable lack of systematic anthropological and archaeological analyses. This leads to limited knowledge of Late Bronze Age burial practices and calls for future multidisciplinary work on the Late Bronze Age cemeteries.

ANNA PRISKIN

New Possibilities in the Research on the Economy of the Late Bronze Age in Hungary

In Hungarian prehistoric archaeology, macrolithic tools have not been the focus of research for a long time. Beyond petrography and typology, there are other methods that help define the significance of stone tools in the prehistoric economy: e.g. food processing or craft specialization. Through the functional, morphological and residue analysis of stone tools, we can reconstruct these activities in the prehistoric community.

The aim of my lecture is to delineate a theoretical background for the interpretation of macrolithic tools and to present the preliminary results of the analysis of lithic tools from Csanádpalota-Földvár, a Late Bronze Age (1300-1100 BCE) fortified settlement in southeastern Hungary, the topic of my PhD research. I will try to answer the following questions: What traces of subsistence economy can we observe in the grinding stone material? How was food processing organized in these Late Bronze Age communities? How do the methods of food processing reflect the social/economic organization of these communities?

The results of the analysis of macrolithic tools can contribute to the better understanding of the settlement hierarchy in the Late Bronze Age. Further research will supply more data on the economy of settlements and the different levels in the settlement hierarchy.

MARTA RAKVIN

The Moslavina Region during the Late Bronze Age and the Early Iron Age

The Moslavina region, situated in the south-western part of continental Croatia, occupies a transitional geographical position connecting the north-western parts of the country, with Slavonia in the east and the Sava river basin (Posavina) to the south. To this day it remains an insufficiently explored area, with only a few known sites that can be attributed to the periods of the Late Bronze Age and the Early Iron Age. Research shows that the Marić hillfort near Kutina was settled from the 12th century BCE and does, therefore, belong to a group of north Croatian Late Bronze Age hillforts that

were founded during the HaA₁ phase. Furthermore, studies show that the settlement prospered during the later phase of the Urnfield Culture and during the transition period to the Early Iron Age. During this phase, a shift occurred in the type of cultural influences that reached the Marić hillfort. Also, some of the finds point to local distinctions and particularities that were specific not only for the Moslavina region, but for the area of northern Croatia as well. A small number of finds indicate that life at the hillfort continued into the Early Iron Age, but no coherent and complete picture can be drawn from the current conclusions.

VINITA RAMLJAK - CARMEN ANITA BARÁTH

The Problem with Human Representations in Late Avar Art

Similarly to other various material cultures of the Migration period, Avar art is also placed at a slippery intersection between art history and archaeology. Human representations form a relatively small group in late Avar art. There are less than 200 examples out of the five thousand late Avar graves where belt decorations were found. With its rare, but spectacular depictions, this unit has always enjoyed high popularity – its research history has a long and rhapsodic background. Our presentation is a brief revision of the current state of research. Where does late Avar art belong to culturally? Where did the Avar people get their set of motifs and narrative scenes? Researchers have been posing these questions for more than a century, and although the answers change depending on the current trend, research methodologies remain similar, if not entirely the same. The reconstruction of analogy networks and the discovery of “prototypes” still remain the main goal of the majority of works written on this topic. The results of these studies add flavor to the research, but they do not move it in a forward direction.

How does Avar art belong to the Mediterranean visual culture complex and how far can the research go in this pursuit? Looking for connections in Mediterranean visual art, and interpreting the connection between the Byzantine Empire and the Avar Khaganate, has become an increasingly popular research subject. Almost all the interpretation attempts have good, plausible arguments, but none of them are without flaws. No matter how one explains the history of certain motifs or the motivation for borrowing them, without reliable written sources all the results and conclusions remain mere speculations. And at this point, ornamental studies have reached their limits.

MIRKO RAŠIĆ

The Archaeological Site Gračine near the City of Ljubuški

The Romans first crossed into the continental part of Illyricum by using the stronghold in Narona, as indicated in the historical sources. In 156 BCE, Caius Martius Figul entered the hinterland with the objective of taking Dalmatae *oppida*. This event is mentioned in the correspondence between consul Vatinius and the famous orator Cicero. Vatinius wrote the first letter in 45 BCE, *ex castris Narona*, which clearly indicates a Roman military presence much earlier than in other areas on the Adriatic coast. However, such a big military unit, consisting of three legions and two cohorts, could not be located in the center of Narona, so we took up some field research. One of the most important Antiquity sites in today's Bosnia and Herzegovina is located in the surrounding area of Narona. This archaeological site sits 5 km south from the center of Ljubuški city, at the micro-location of Gračine.

This site is known in literature under the name Bigeste. Many authors wrote about this area as part of a border in Dalmatia, between the indigenous (continental) people in the north and the newcomer (coastal) Roman population in the south.

Archaeological excavations of the site were conducted between 1977 and 1980, and they are the only systematic excavations done at the site so far. Gračine was neglected and exposed to accelerated deterioration. It was declared a national cultural monument in 2003, and since then three zones have been under strict protection, including the excavated area and the wider archaeological site. Unfortunately that did not stop many private parties, i.e. land owners, to incrementally destroy the site with construction work.

There is a serious difference of opinion in recent scientific literature concerning the nature of this site. Unfortunately, I. Bojanovski did not further examine the uncovered artifacts after the excavation ended, and years later we still have only a small number of analyzed material from the site. The nature and dating of the site remain doubtful due to the lack of a structured analysis and the unpublished finds. This work

This work will be based on a review of the previous research, and the analysis of the archaeological material from the excavations, in order to define the nature and the date of the site, and also to better understand the process of Romanization and trading in the Narona hinterland.

LUCIANA RUMEGA-IRIMUŞ

Pottery Finds of the Basarabi Type in the Mures Valley. A Chronological and Typological Approach

The so-called Basarabi type of pottery characterizes the middle Hallstatt period in today's Romania, but the finds of this kind come from a much wider area. The presentation discusses a recent discovery from the Basarabi period in the Mures Valley, at

the site of Tartaria – Podu Tartariei vest. Rescue excavations undertaken here in 2012 led to the discovery of sizable quantities of this type of prehistoric pottery. One has to outline that the scale of the aforementioned excavations (more than 2 ha) offered the opportunity for in-depth field research, thus uncovering a large quantity of Basarabi pottery in a well-documented archaeological context. As a result, it is possible to more thoroughly analyze the Basarabi type, looking at the chorological, typological and functional aspects. Since the attempts to catalogue the various styles of pottery typical for the middle Hallstatt period (early Iron Age) are rather limited in Romania, this new approach aims to provide better knowledge and understanding of the so-called Basarabi style, and find its meaning.

VLAD RUMEGA-IRIMUȘ

The GIS Data Repository of Roman Mining Heritage from the Golden Quadrilateral Area in the Apuseni Mountains, Transylvania*

My PhD research focuses on the valorisation and conservation of ancient mining heritage from the centre and north-west of Romania, or more precisely, on the vestiges of ferrous and non-ferrous ore mining, from prehistory to the Roman period. The most important mining works in this area were made during the Roman period. It is widely known among scholars that one of the main reasons the Roman Empire wanted to conquer the Dacian kingdom at the beginning of the 2nd c. CE was for the abundant metallic ore deposits in the area. The ancient exploitations of mineral resources from *Alburnus Maior* (nowadays Rosia Montana) were explored during the recent large-scale archaeological excavations which uncovered new data and major finds. Other ancient mining sites in the area still remain unknown and under-researched.

The presentation will focus on the GIS data repository of Roman mining heritage from the Golden Quadrilateral area. This research combines the information from the published referential sources with recent field observations. The GIS data repository of integrated old and new information on Roman mining practices will make it easier to analyze the relationship between the mining vestiges and artifacts and the distribution of ferrous and non-ferrous deposits in the “Golden Quadrilateral” in the Apuseni Mountains, Transylvania.

Various criteria were considered for input into the repository: mining shafts, galleries, mines, washing/panning areas and mining tools determined by location, find category, history of research, more recent exploitation (medieval/modern/contemporary) and current status of conservation.

* The presentation is part of the MINERVA project, supported by the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectoral Operational Programme for Human Resources Development 2007–2013 [grant POSDRU 159/1.5/S/137832]

PETRA STIPANČIĆ

Novo mesto – Kapiteljska njiva. Late bronze Age Graves – A Time of Change at Kapiteljska njiva

The cemetery of Kapiteljska njiva which was in use throughout the 1st millennium BCE is located on a levelled area of a hill close to the prehistoric Marof hillfort. Excavations have so far uncovered 292 Late Bronze Age inturned cremation graves, 45 Early Iron Age barrows and 711 La Tène cremation graves.

The Late Bronze Age graves are characterised by large pottery urns, which were filled with charcoal, ash, burnt bone and small grave goods. In some rare graves the cremated remains were placed in the cremation pit without an urn. The latter were usually covered with a pottery bowl with an inturned rim or even with an additional stone slab. The urn was placed in a simple, largely circular depression of the same diameter as the urn. A stone slab was often placed on the base of the cremation pit. The majority of graves and the upper part of the ceramic urns have been damaged by ploughing over the years. Typologically, male graves are characterised by bronze dress pins with a variety of heads. Although the deposition of weapons in graves is not usual for this period, they appear as part of the male grave set at Kapiteljska njiva. Female graves are typologically defined by ring jewellery (bracelets, neck rings, ringlets), fibulae (spectacle fibula and bow fibula), pottery spindle whorls and loom weights, which were used for spinning and weaving cloth. Glass beads are relatively common and numerous, which is not typical of other contemporary sites. The majority were produced from blue glass in a variety of shades, with or without dot-and-eye decoration, in a ring form with a large central suspension hole. The first iron objects appear in the richer graves at Kapiteljska njiva. In this period, when iron was not yet in general use, it was used exclusively to produce ornaments, bracelets, neck rings and fibulae.

My research work will try to pinpoint the time of change from the Late Bronze Age to the Early Iron Age by using the grave material. The same material occurs in the cremation pits and in grave burials.

ANDRÁS SZABÓ

A Silver Magic Lamella from the Northern Cemetery of Sopiana (Pécs, Hungary)

The Janus Pannonius Museum (Pécs, Hungary) conducted excavation work in the courtyard of the Nagy Lajos Gimnázium, in 2002, which forms part of the northern necropolis of Sopiana. During the archaeological work, 133 graves of mixed burial rites were uncovered, and one grave burial, dated to the 4th c., has yielded a very unique find: a rolled-up silver lamella with Greek inscriptions, which can be identified as a magical amulet or *phylacterion*. These magical amulets were most often used as protective charms, and as such, contained inscribed magical formulas, *logoi* and *charaktêrés*.

In our presentation we will not only investigate the silver *phylacterion* from a philological and historical approach, but we will try to analyze the connection between the magical and burial practices through the examination of the archaeological context.

DÉNES SZABÓ

Ritual Deposits from the Rural Settlements of the 10th-13th Century Carpathian Basin

Ritual deposits are known from the rural settlements of the 10th – 13th c. Carpathian Basin, but they are not always recognized as such. Numerous vessels containing animal sacrifice are usually seen as construction deposits or border markers. Several examples of full or partially fragmented pots and clay cauldrons, sacrificed dogs, and secluded horse skulls are known from the period. How can these deposits be understood, considering their orientation and archaeological context? To what extent might the archaeological items, or the “waste” lying in the semi-subterranean buildings, be interpreted as the result of a deliberate backfilling process? These deposits also shed light on the contemporary structure of the area and folk beliefs. What kind of connections can be suggested to the cyclic medieval agriculture and the periodic abandonment of settlements?

KATA SZILÁGYI

Analysis of Household Units from Chipped Stone Tools

The site Alsónyék-Kanizsa-dűlő belongs to the Southeast-Transdanubian group of the Late Neolithic Lengyel culture. The chipped stone tools stem exclusively from the settlement at Alsónyék. This research focuses on the definition of raw material, so central focus is given to the typological and technological analysis, and the household aspect.

The settlement's collection is analyzed from the point of view of household archaeology, whose research methods have gained ground in the last few years. This is backed by favourable conditions, such as large-scale excavations joined by large-scale construction projects, and the archaeologist's more frequently used go-to approach which includes new types of analyses from natural sciences.

The technical analysis of chipped stone tools provides an opportunity for the reconstruction of the tool making process, which may give insight into the system of tool production within a cultural unit. The work process and the sequence phases show the place and aspect/character of tool making on site, on a rudimentary level. This method enables the localisation of activity zones in the settlement. The activity zones, defined from the results of the technological analysis of all types of artefacts, determine the

final household units. The settlement structure at Alsónyék comprises of large pits, which contain the great majority of chipped stone tools. The post-framed houses and large pits determined four significant comparable household units, which allowed for a hypothetical assumption. The raw material distribution of the household units reveals a near-equivalent ratio, and additionally, every tool variety occurs at the site, which consequently leads to the assumption that comprehensive tool production was present at the settlement. However, based on the differences between the typological categories of the household units, tool manufacturing was located only partially at the site.

MIROSLAVA ŠURINOVÁ

Is Every Roman Fort a Fort? Problems with the Identification of Roman Forts in Egypt

Egypt was a part of the Roman Empire, and later the Byzantine Empire, for over six hundred years. The military presence in the province was always strong. First there were three legions and several auxiliary units stationed there. Even though the size of the army decreased during Late Antiquity, Roman soldiers remained a sizable part of the population. Roman soldiers were usually stationed in forts and fortresses across the Empire, and Egypt was no exception. Today there are many structures in Egypt identified as Roman forts. Some of them were clearly built in the style of Roman fort architecture. However, there are other structures that were interpreted as Roman forts in scientific literature, even though their architectural form is different. Are those buildings really Roman forts? Is there any proof that they were used by the Roman army? Or were they simply misinterpreted? This paper will try to answer these questions. The main focus will be on the Roman fortresses of the Western desert, occasionally called fortified temples.

GERGELY TÓTH

Roman Weapons from Aquincum

I would like to present my research on Roman weapons from Aquincum. I will try to collect all available items and devise a typology by discussing the following issues: the excavated weapon types, their owners and users (legions or auxiliary troops), their provenance and finding circumstance (the cemetery, military camp, etc.), the number of items in our museums, and the representation of weapons in visual arts.

MALVINKA URÁK**Late Iron Age Settlement Structures in the Eastern Carpathian Basin. The Case Study of the Settlement Features from Giarmata (Timiș county) and Cicir (Arad county), Romania (4th-3rd century BCE)**

The period of the late 4th and early 3rd century BCE was marked by the migration of the Celts towards the southern and eastern parts of Europe. While historical sources contain useful information regarding their path to the Balkans, for the south-eastern part of the Carpathian Basin we can rely solely on the data provided by archaeology. Over the last few decades, fieldwork has revealed several cemeteries and burial sites, drawing the line of Celtic expansion from the Great Hungarian Plain towards Transylvania and the Banat region. Conversely, the settlements of this period have been poorly researched. In addition to the abundant information provided by the cemeteries, further exploration of the inner organization of settlements would considerably help to understand their social organization.

The aim of this PhD is to compensate for this lack of information by processing artifacts from two recently excavated settlements from the Banat region. By analyzing and quantifying the information uncovered in the past few decades, we would like to link our research area – a geographical region which served as the starting point and as the background of the Balkan invasions - with the international circulation of the La Tène culture.

TÜNDE VÁGÁSI**The Representation of the Mithras and Dolichenus Cults in the Pannonian Army**

The Roman Empire's largest army was stationed in Pannonia, with 4 legions and many auxiliary troops. About fifty thousand professional soldiers secured the Empire and the limes. Five percent of the Pannonian population was in the army. It is not surprising that out of all mystery religions, the most common ones were those associated with the *triumphalis* aspect, like the Mithras and Dolichenus cults. Our province had a unique position concerning the religious aspects of Mithras and Dolichenus. The cults were spread mostly due to the mobility of the Roman army. Apart from Rome, most of our inscriptions and sanctuaries related to these cults come from Pannonia. The first sanctuary was built at the beginning of the second century CE, during the rise of these cults. In my presentation I want to draw attention to the vital role the army played in the process of spreading new cult movements, using 80 inscriptions as examples. In addition I want to show the specific dedication forms in Pannonia, which are also represented in the inscriptions dedicated by the soldiers.

MÁRIA VARGHA

Domus Dei, Porta Caeli? Field Cemeteries as Precursors of Churchyards in Medieval Hungary

Regarding the archaeology of Christianisation, surely, the most crucial issue is the spread of church foundations, and therefore of churchyards, as clear marks of the process. However, until the end of the twelfth century, there were different coeval cemetery types. The largest problem of the archaeological research of graveyards of this period has been the overly simplified typology of cemeteries that divided them into pagan field cemeteries and Christian churchyards, despite archaeological evidence showing the existence of numerous transitional types (something which is not specific but is also consonant with trends in the international scientific community). Of these, Hungarian researchers have only dealt with the so-called Gellértegyháza type cemetery, (or rather tried to fit all cemeteries into this category). The name refers to a churchyard cemetery established over a (pagan?) funerary site. There are several problems with this theory, and because of that, it is still under debate.

The problem here is that canon law strictly prohibited the burial of people on locations where the pagans had previously been buried, so in theory, our situation should not exist. However, despite these regulations, there are several examples of churchyards that overlap with the previously existing field cemeteries, even though the eponymous site for this cemetery type at Gellértegyháza (located in the southeast part of present day Hungary), was proven to not fall under this category. In addition, historical sources testify that Christian field cemeteries were created as the result of a complex process. The *Legenda Maior* on Saint Gerald says that “the bishop went together with his monks to visit his diocese and to consecrate those burial sites, where they want to build churches”. The aim of this paper is to revisit the problem of these “transitional type” cemeteries, and to present several sites that may help to understand this process a bit better.

MIRNA VUKOV

Some Questions on Roman Food Supply in the Area of the Danube and Dalmatae Limes. Overview of the Published Amphorae from Roman Military Sites in Croatia

Extensive trade routes were established between the various parts of the Roman Empire after the territories of the provinces of Dalmatia and Pannonia had been conquered. Amphorae were used as storage containers for the transport of food items required to meet the needs of the settled Roman soldiers and the families that followed them. The contents and provenance of the amphorae were analysed, giving us insight into the dietary habits of Roman soldiers and the origin of the imported items. Based on the finds, the troops stationed here mostly consumed wine from southern and northern Italy, southern Hispania and the Aegean region. Apart from wine, they also consumed large amounts of olive oil imported from southern and northern Italy, the

Aegean Islands, Hispania and Istria. Fish products were shipped from Hispania, and dried fruit was imported from the eastern Mediterranean region and from southern and northern Italy.

This paper will discuss the published amphorae in order to possibly extend our knowledge of the dietary habits of Roman soldiers, as well as explore their surroundings, based on the military sites along the Danube and Dalmatae limes.

MACIEJ WACŁAWIK

Why Did the Ancients Make Counterweights in the Shape of An Acorn?

During the first season of the Paphos Agora Project excavations, a small bronze steelyard with an acorn-shape weight was found in Trench II. After two years, both items were cleaned and preserved. During this process important new details came to light. The counterweight was made of cuprum and covered in a bronze shell.

Counterweights of similar shape have been found on other sites across the Mediterranean, and are exhibited at many museums all over the world. It is quite intriguing that ancient people made counterweights shaped like an acorn. Earlier samples were shaped like a simple sphere or a hexahedron. These forms were quite easy and obvious to make, but with time counterweights began to take on more complex forms, like the bust of Minerva or the reigning emperor. These “bust type” counterweights had more than mere aesthetic advantage, they also carried symbolic meaning. In the Roman period, the goddess of wisdom was the guardian of pecuniary transactions. In later times, when Christianity became the only religion of the Empire, Minerva changed from the goddess of wisdom to the symbol of Holy Wisdom. The “emperor bust” counterweight carried similar meaning, representing the idea that the emperor was a “guardian” of transactions.

From excavated samples we know that they did not use any shape other than the acorn. It is interesting to discuss why they chose that particular shape out of all others. The acorn is also popular in jewellery, but nowhere else. It seems that the acorn was the symbol of Minerva and in this regard it attested to the fairness of the transaction between the buyer and the seller.

BARBARA ZAJAC

The Political, Economic and Cultural Situation in Cappadocia Based on the Provincial Coinage from the Reign of Trajan (AD 98-117)

Trajan's reign was one of the most important periods of the Roman Empire, with great prosperity extending to the boundaries of state. Provincial territories were areas of dynamic and flourishing life with governing laws, economy and culture. Provincial

coinage had similar denominations, values and iconography with imperial coinage, but it was still related to the life in the province. Cappadocia became a part of the Roman Empire during the reign of Tiberius, and it had its own systematic monetary tradition. In Cappadocian Caesarea, the capital of province, silver and bronze coins were regularly minted, but E. A. Sydenham distinguished two phases of intensified minting activity during the reign of Trajan, probably related to military expeditions. The production of the mint was probably determined by the political situation. W. Metcalf and A. Kunisz specifically refer to this. The iconography varied and reflected the traditions and the culture of the province. The motifs of Mount Argaeus and the club of Hercules were typically represented. Caesarea was one of the most important centers of Roman provincial minting activity. Coins from this mint were found in the UK, France, Germany and Poland. The main purpose of the lecture is to present the main aspects of minting activity in Cappadocia and emphasize the political, economic and cultural situation present there. The iconographic types could give us more information about the architecture and the cults in the province during Trajan's era.

Ákos ZIMONYI

Being a Physician in the 10th Region of Italy (Venetia et Histria) during the Principate

Studies of the social status of healers in Antiquity have agreed on the relatively low status of doctors in the western half of the Roman Empire. This is in sharp contrast to the social position of physicians illustrated by inscriptions from the East, where the doctor is frequently painted as prosperous member of the provincial society. However, recent studies argue that the difference in public profile between the doctors of the East and the West is less of a historical fact, and more a reflection of the bias of epigraphic sources towards the civic prosperity of Asia Minor in the golden age of the Antonines. Wealth led to the erection of inscriptions which reveal the life of the city in greater detail than the correspondingly fewer Latin inscriptions from e.g. Tarraco, Mediolanum or Aquincum. Thus it is reasonable to examine the status of physicians in a region with greater prosperity in the Latin speaking half of the Roman Empire. Aquileia, one of the world's largest cities in the 2nd century CE, and its vicinity have to be considered ideal for this kind of research, for all types of doctors (civic, military, private doctors, specialists, slaves and freedmen) can be found in the Regio X of Italy. My aim in this paper is to examine the health care of Venetia et Histria, and the role of physicians in this system, by re-examining the inscriptions of physicians from this region. I will compare the local and the imperial health care, reflecting on the presence of civic physicians, the large number of Greek physicians, and slaves serving as doctors.

VALENTINA ZOVIĆ

Munificence of Public Games and Entertainment Buildings in Roman Dalmatia

Entertainment and public games played an important role in the everyday life of ancient Romans. Therefore, gladiatorial games, athletic competitions and other various performances were regularly organized, and buildings intended to house these kinds of activities, like theaters, amphitheatres and similar, were widespread all over the Roman Empire. According to the Late Antiquity scholar Isidore from Seville, Roman public games (*ludi*) could be classified into four types: *ludi gymnici* (athletic games), *ludi circenses* (games held in the circus), *ludi gladiatorii* (gladiatorial games), and *ludi scaenici* (theatrical games). All these *ludi* were held for the entertainment and benefit of religious festivals, sometimes also in conjunction with them, and they often involved the entire community.

In the Roman province of Dalmatia, as well as in other parts of the Roman Empire, munificence frequently meant the organization of public games and/or building spectator buildings. For example, amphitheatres were built in Salona and Burnum, *pergula* and *maenianum* in Aenona, three-day *ludi scaenici* were organized in Narona, etc. This paper will focus on the games and types of public structures known from Roman Dalmatia, on the reasons of their construction and organization, and on the people who financed them.

LIST OF PARTICIPANTS

NIKOLINA ANTONIĆ

PHD STUDENT - POSTGRADUATE DOCTORAL PROGRAM "MEDIEVAL STUDIES", FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
NOVOMAROFSKA 43, 10000 ZAGREB, CROATIA
nikolina.antonice@gmail.com

CARMEN ANITA BARÁTH

DORNYAI BÉLA MÚZEUM, MÚZEUM TÉR 2, 3100 SALGÓTARJÁN, HUNGARY
carmenanita.barath@gmail.com

RALUCA-ELIZA BĂTRÎNOIU

PHD STUDENT - UNIVERSITY OF BUCHAREST
446 MIHAI BRAVU, BRĂILA, 810105, ROMANIA
eliza_raluca@yahoo.com

ANJA BERTOL

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
ARCHAEOLOGICAL MUSEUM IN ZAGREB, TRG NIKOLE ŠUBIĆA ZRINSKOG 19, 10000 ZAGREB, CROATIA
abertol@amz.hr

SILVIA BETINELLI

PHD STUDENT - NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS
VIA DANTE 25, 26100, CREMONA, ITALY
silviabet87@gmail.com

BRUNO BIJAĐIJA

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY "ARCHAEOLOGY OF THE EASTERN ADRIATIC", UNIVERSITY OF ZADAR
GORNJI KONO 56 D, 20 000 DUBROVNIK, CROATIA
bruno.bijadija@gmail.com

IMOLA BODA

PHD STUDENT - BABEŞ-BOLYAI UNIVERSITY, CLUJ-NAPOCA
CENTRE FOR ROMAN STUDIES, BABEŞ-BOLYAI UNIVERSITY, STRADA MIHAIL KOGĂLNICEANU 1, CLUJ-NAPOCA, 400084, ROMANIA
boda_imola@yahoo.com

JAN BULAS

PHD STUDENT - JAGIELLONIAN UNIVERSITY, INSTITUTE OF ARCHEOLOGY
MACEDOŃSKA 23/13, KRAKÓW 30-638, POLAND
bulas.jan@gmail.com

DR. MARCEL BURIC, ASSISTANT PROFESSOR
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
mburic@ffzg.hr

EVA BUTINA
PHD STUDENT - UNIVERSITY OF LJUBLJANA
PODBORŠT 5, 1296 ŠENTVID PRI STIČNI, SLOVENIA
eva.butina@gmail.com

RICCARDO CECOVINI
PHD STUDENT - DOTTORATO INTER-ATENEIO UNIVERSITÀ DEGLI STUDI DI TRIESTE & UNIVERSITÀ DEGLI STUDI DI UDINE "STORIA DELLE SOCIETÀ, DELLE ISTITUZIONI E DEL PENSIERO. DAL MEDIOEVO ALL'ETÀ CONTEMPORANEA"
VIA ASCOLI 27, 34170 GORIZIA, ITALY
ricc.cecovini@hotmail.it

LADISLAV CHMELO
PHD STUDENT - CONSTANTINE THE PHILOSOPHER UNIVERSITY IN NITRA
HODŽOVA 1, 949 74, NITRA, SLOVAKIA
lchmelo@gmail.com

FLORIN CIULAVU
PHD STUDENT - VASILE PÂRVAN INSTITUTE OF ARCHAEOLOGY, BUCHAREST
HENRI COANDĂ STR., 010667, BUCHAREST, ROMANIA
florinciulavu@yahoo.com

PÉTER CZUKOR
PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
MÓRA FERENC MUSEUM, SZEGED 6420, ROOSEVELT TÉR 1-3, HUNGARY
peterczukor@gmail.com

DR. DINO DEMICHELI, RESEARCH ASSISTANT
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
ddemiche@ffzg.hr

DR. ŽELJKO DEMO, MUSEUM ADVISOR
ARCHAEOLOGICAL MUSEUM IN ZAGREB, TRG NIKOLE ŠUBIĆA ZRINSKOG 19, 10000 ZAGREB, CROATIA
zeljko.demo@zg.t-com.hr

LINA DIERS
PHD STUDENT - UNIVERSITY OF VIENNA
HANS-SACHS-GASSE 4/6, 1180 VIENNA
linadiers@hotmail.de

LAURA-SIMONA DRAȘOVEAN

PHD STUDENT - INSTITUT FÜR PRÄHISTORISCHE ARCHÄOLOGIE, FREIE UNIVERSITÄT BERLIN
PRENZLAUER ALLEE 209A, 10405 BERLIN, GERMANY
lauradrasovean@yahoo.com

TOMASZ DZIURDZIK

PHD STUDENT - DEPARTMENT OF ARCHAEOLOGY OF ROMAN PROVINCES, INSTITUTE OF AR-
CHAEOLOGY,
UNIVERSITY OF WARSAW
UL. OKULICKIEGO 5/20, 03-984 WARSZAWA, POLAND
tdziurdzik@wp.pl

ANA ĐURIČIĆ

PHD STUDENT - FACULTY OF PHILOSOPHY, UNIVERSITY OF BELGRADE
ČIKA LJUBINA 18-20, 11000 BELGRADE, SERBIA
ana.djuricic@f.bg.ac.rs

ISTVÁN GERGŐ FARKAS

PHD STUDENT - INTERDISCIPLINARY DOCTORAL SCHOOL, ANCIENT HISTORY PROGRAM
FROM THE DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES, UNIVERSITY OF PÉCS
7624 PÉCS, RÓKUS STR. 2, HUNGARY
farkas.istvan.gergo@gmail.com

ÁGOTA FERENCZ-MÁTÉFI

PHD STUDENT - INTERDISCIPLINARY DOCTORAL SCHOOL, ANCIENT HISTORY PROGRAM
FROM THE DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES, UNIVERSITY OF PÉCS
FŐ STREET 161, 1196 BUDAPEST, HUNGARY
agotaferenczmatefi@gmail.com

MATEJA HULINA

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMA-
NITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
INSTITUTE OF ARCHAEOLOGY IN ZAGREB, LJUDEVITA GAJA 32, 10000 ZAGREB, CROATIA
mateja.hulina@gmail.com

DORA IVANIŠEVIĆ

PHD STUDENT - DEPARTMENT OF MEDIEVAL STUDIES, CENTRAL EUROPEAN UNIVERSITY,
BUDAPEST
A. T. MIMARE 4, 10000 ZAGREB, CROATIA
dora09@gmail.com

DR. MIRJA JARAK, ASSOCIATE PROFESSOR

DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVER-
SITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
mirja.jarak@inet.hr

SZYMON JELLONEK

PHD STUDENT - JAGIELLONIAN UNIVERSITY, INSTITUTE OF ARCHEOLOGY
KAMIONKA 11/14, CRACOW 31-586, POLAND
sjellonek@gmail.com

JELENA JOVANOVIĆ

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
ARCHAEOLOGICAL MUSEUM IN SPLIT, ZRINSKO-FRANKOPANSKA 25, 21 000 SPLIT, CROATIA
jelena.jovanovic@armus.hr

DR. IVA KAIĆ, RESEARCH ASSISTANT

DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
ikaic@ffzg.hr

PALMA KARKOVIĆ TAKALIĆ

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY "ARCHAEOLOGY OF THE EASTERN ADRIATIC", UNIVERSITY OF ZADAR
DEPARTMENT OF ART HISTORY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF RIJEKA, SVEUČILIŠNA AVENIJA 4, 51000 RIJEKA, CROATIA
pkarkovic@ffri.hr

JULIA KOCH

PHD STUDENT - UNIVERSITÄT BAMBERG
INSTITUT FÜR ARCHÄOLOGIE, DENKMALKUNDE UND KUNSTGESCHICHTE, ARCHÄOLOGIE DER RÖMISCHEN, PROVINZEN AM KRANEN 14, 96045 BAMBERG, GERMANY
julia.koch@uni-bamberg.de

ELENA LEGHISSA

PHD STUDENT - UNIVERSITY OF LJUBLJANA
INSTITUTE OF ARCHAEOLOGY, SLOVENIAN ACADEMY OF SCIENCES AND ART, NOVI TRG 2, 1000 LJUBLJANA, SLOVENIA
elena.leghissa@zrc-sazu.si

NÁNDOR LEHRER

PHD STUDENT - UNIVERSITY OF DEBRECEN
UNIVERSITY OF DEBRECEN, INSTITUTE OF HISTORY. 4032, EGYETEM TÉR 1. DEBRECEN, HUNGARY
jedienclave@gmail.com

MICHAŁ LINK-LENCZOWSKI

PHD STUDENT - INSTITUTE OF ARCHEOLOGY, JAGIELLONIAN UNIVERSITY, KRAKÓW
DEPARTMENT OF HISTORY, INSTITUTE OF ARCHAEOLOGY, JAGIELLONIAN UNIVERSITY, GOŁĘBIA 11, 31-007 KRAKÓW, POLAND
link.lenczowski@gmail.com

ZUZANA LITVIAKOVÁ

PHD STUDENT - FACULTY OF PHILOSOPHY, COMENIUS UNIVERSITY
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF PHILOSOPHY, COMENIUS UNIVERSITY, GONDОВА 2, P.O. BOX 32, 814 99 BRATISLAVA, SLOVAKIA
litviakova.z@gmail.com

DR. DARIA LOŽNJAK DIZDAR, RESEARCH ASSOCIATE
INSTITUTE OF ARCHAEOLOGY, LJUDEVITA GAJA 32, 10000 ZAGREB, CROATIA
dldizdar@iarh.hr

DUNJA MARTIĆ
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
AL. A. AUGUSTINČIĆA 14, 10000 ZAGREB, CROATIA
dunjamartici@gmail.com

TONKA MATANA
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
BANA JOSIPA JELAČIĆA 3, 20 000 DUBROVNIK, CROATIA
tonkamatana@gmail.com

DR. JANJA MAVROVIĆ MOKOS, RESEARCH ASSISTANT
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
jmavtovi@ffzg.hr

ANA MIKULKA
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
FRANA BOŠNJAKOVIĆA 2, 10000 ZAGREB
mikulka.ana@gmail.com

DR. MARINA MILIĆEVIĆ BRADAČ, FULL PROFESSOR WITH TENURE
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
mmilicev@ffzg.hr

DR. INA MILOGLAV, RESEARCH ASSISTANT
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
imilogla@ffzg.hr

MIRO NAĐ
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
ARCHAEOLOGICAL MUSEUM IN ZAGREB, TRG NIKOLE ŠUBIĆA ZRINSKOG 19, 10000 ZAGREB, CROATIA
mnad@amz.hr

SZABOLCS NAGY
PHD STUDENT - DEPARTMENT OF HUNGARIAN MEDIEVAL AND EARLY MODERN ARCHAEOLOGY, INSTITUTE OF ARCHAEOLOGICAL SCIENCES, EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
BÍRÓ LAJOS U. 13, BUDAPEST 1089, HUNGARY
nagyszabolcsbalazs@gmail.com

LUCIANA NEDELEA

PHD STUDENT - BABEȘ-BOLYAI UNIVERSITY, CLUJ-NAPOCA
CAMELIEI STR. 5, BISTRIȚA (BISTRIȚA-NĂȘĂUD), 420109, ROMANIA
vallachorum_noctis@yahoo.com

RÉKA NEMÉNYI

PHD STUDENT - INTERDISCIPLINARY DOCTORAL SCHOOL, ANCIENT HISTORY PROGRAM
FROM THE DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES, UNIVERSITY OF PÉCS
RÓKUS UTCA 2, M ÉPÜLET, 1. EMELET, 7624 PÉCS, HUNGARY
nemenyireka@gmail.com

MICHAELA NIKLOVÁ

PHD STUDENT - CONSTANTINE THE PHILOSOPHER UNIVERSITY IN NITRA
HODŽOVA 1, 949 74, NITRA, SLOVAKIA
michaela.niklova@gmail.com

KAMILA NOCOŃ

PHD STUDENT - DEPARTMENT OF CLASSICAL ARCHAEOLOGY, INSTITUTE OF ARCHAEOLOGY,
JAGIELLONIAN UNIVERSITY, KRAKÓW
GOŁEBIA 11 STR., 31-007 KRAKÓW, POLAND
Kamila.nocon@uj.edu.pl

JADWIGA OLBROT

PHD STUDENT - JAGIELLONIAN UNIVERSITY, KRAKÓW
LEA 9B/11, 30-052 KRAKÓW, POLAND
jadwiga.olbrot@gmail.com

IOAN OPREA

PHD STUDENT - ALEXANDRU IOAN CUZA UNIVERSITY, IAȘI
BULEVARDUL CAROL I 11, 700506 IAȘI, ROMANIA
dasandrius@hotmail.com

DR. ANA PAVLOVIĆ, RESEARCH ASSISTANT

DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVER-
SITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
apavlovi3@ffzg.hr

ANNAMÁRIA-IZABELLA PÁZSINT

PHD STUDENT - BABEȘ-BOLYAI UNIVERSITY, CLUJ-NAPOCA
CALEA MĂNĂȘTUR 101, 57, CLUJ-NAPOCA, 400663
aipazsint@gmail.com

JONA PETEŠIĆ

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY "ARCHAEOLOGY OF THE EASTERN
ADRIATIC", UNIVERSITY OF ZADAR
SALI VII 31, 23281 SALI - DUGI OTOK, CROATIA
jona.noir@gmail.com

AURA PICCIONI
PHD STUDENT - REGENSBURG UNIVERSITY
VIA CROPANI 23, 00118 ROMA, ITALIA
artemisiaz2006@tiscali.it

ZRINKA PREMUŽIĆ
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
INSTITUTE FOR ANTHROPOLOGICAL RESEARCH, LJUDEVITA GAJA 32, 10000 ZAGREB. CROATIA
zpremuzic@inantro.hr

ANNA PRISKIN
PHD STUDENT - INTERDISCIPLINARY DOCTORAL SCHOOL, ANCIENT HISTORY PROGRAM FROM THE DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES, UNIVERSITY OF PÉCS & UNIVERSITAT AUTONÓMA DE BARCELONA
RÓKUS UTCA 2, 7624 PÉCS, HUNGARY
priskin.annamaria@pte.hu

MARTA RAKVIN
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
TRG KRALJA PETRA KREŠIMIRA IV 5, 10000 ZAGREB, CROATIA
martarakvin@gmail.com

VINITA RAMLJAK
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
TRATINSKA 77, 10000 ZAGREB, CROATIA
vinita.ramljak@gmail.com

MIRKO RAŠIĆ
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY "ARCHAEOLOGY OF THE EASTERN ADRIATIC", UNIVERSITY OF ZADAR
STJEPANA RADIĆA 37B, 88220 ŠIROKI BRIJEG, BOSNIA AND HERZEGOVINA
mirko_rasic55@hotmail.com

LUCIANA RUMEGA-IRIMUŞ
PHD STUDENT - VASILE PÂRVAN INSTITUTE OF ARCHAEOLOGY, BUCHAREST
NATIONAL HISTORY MUSEUM OF ROMANIA, CALEA VICTORIEI 12, COD 030026, BUCHAREST, ROMANIA
luciana_dr@yahoo.com

VLAD RUMEGA-IRIMUŞ
PHD STUDENT - VASILE PÂRVAN INSTITUTE OF ARCHAEOLOGY, BUCHAREST & VALAHIA UNIVERSITY, TÂRGOVIŞTE
SCORȚARILOR STREET, BL. D5, SC. B, AP. 21, 400 186, CLUJ-NAPOCA, ROMANIA
vladrumeaga@gmail.com

DR. MIRJANA SANADER, FULL PROFESSOR WITH TENURE
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
msanader@ffzg.hr

PETRA STIPANČIĆ
PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
DOLENJSKI MUZEJ NOVO MESTO, MUZEJSKA ULICA 7, 8000 NOVO MESTO, SLOVENIA
petra.stipancic@gmail.com

ANDRÁS SZABÓ
PHD STUDENT - DEPARTMENT OF ARCHAEOLOGY, INTERDISCIPLINARY DOCTORAL SCHOOL, UNIVERSITY OF PÉCS
HUNGARIAN NATIONAL MUSEUM, MÚZEUM KRT. 14-16, 1088 BUDAPEST, HUNGARY
szabo.andras.022@gmail.com

CSABA SZABÓ
PHD STUDENT - DEPARTMENT OF ARCHAEOLOGY, INTERDISCIPLINARY DOCTORAL SCHOOL, UNIVERSITY OF PÉCS & MAX WEBER KOLLEG, UNIVERSITY OF ERFURT
RÓKUS UTCA 2, M ÉPÜLET, 1. EMELET, 7624 PÉCS, HUNGARY
szabocsaba.pte@gmail.com

DÉNES SZABÓ
PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
KÖZÉP-KAPU UTCA 19.A 6725 SZEGED, HUNGARY
szabo1848denes@gmail.com

KATA SZILÁGYI
PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
MÓRA FERENC MÚZEUM, ROOSEVELT TÉR 1-3, 6720 SZEGED, HUNGARY
szil.szvetlana@gmail.com

DR. ZRINKA ŠIMIĆ-KANAET, RESEARCH ASSISTANT
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
zsimic@ffzg.hr

MIROSLAVA ŠURINOVÁ
PHD STUDENT - CHARLES UNIVERSITY, PRAGUE
VYSOKÁ NAD KYSUCOU, 280, 02355, SLOVAKIA
MiroslavaSurinova@seznam.cz

DR. DOMAGOJ TONČINIĆ, ASSISTANT PROFESSOR
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
dtoncini@ffzg.hr

GERGELY TÓTH

PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
HERMAN OTTÓ ÁLTALÁNOS ISKOLA, IFJÚSÁG UTCA 6 B, 2040 BUDAÖRS, HUNGARY
tger81@freemail.hu

MALVINKA URÁK

PHD STUDENT - BABEȘ-BOLYAI UNIVERSITY, CLUJ-NAPOCA
STR. ION MESTER 7, SC. 4, AP. 43, CLUJ-NAPOCA, ROMANIA
urak.malvinka@yahoo.com

TÜNDE VÁGÁSI

PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
DÓZSA GYÖRGY STREET 14. II/12, 2760 NAGYKÁTA, HUNGARY
vagasitunde6@citromail.hu

MÁRIA VARGHA

PHD STUDENT - CENTRAL EUROPEAN UNIVERSITY, BUDAPEST
JÓZSEF KRT 67. 1085 BUDAPEST, HUNGARY
m.vargha@gmail.com

MIRNA VUKOV

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB
DEPARTMENT OF ARCHAEOLOGY, FACULTY OF HUMANITIES AND SOCIAL SCIENCES, UNIVERSITY OF ZAGREB, IVANA LUČIĆA 3, 10000 ZAGREB, CROATIA
mvukov@ffzg.hr

MACIEJ WACŁAWIK

PHD STUDENT - INSTITUTE OF ARCHAEOLOGY, JAGIELLONIAN UNIVERSITY, KRAKÓW
9B/3 ŁOWIECKA STR, 41-707 RUDA ŚLĄSKA, POLAND
maciej.waclawik@gmail.com

BARBARA ZAJAC

PHD STUDENT - INSTITUTE OF ARCHAEOLOGY, JAGIELLONIAN UNIVERSITY, KRAKÓW
STRADOMSKA STREET 17/8, 31-068 CRACOW, POLAND
basia.zajac21@gmail.com

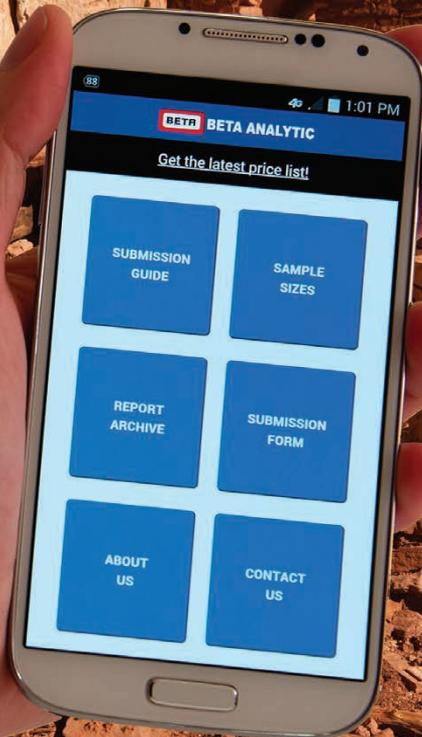
ÁKOS ZIMONYI

PHD STUDENT - EÖTVÖS LORÁND UNIVERSITY (ELTE), BUDAPEST
BUKAREST U. 19, 1114 BUDAPEST, HUNGARY
zimonyi.akos@gmail.com

VALENTINA ZOVIĆ

PHD STUDENT - POSTGRADUATE DOCTORAL STUDY "ARCHAEOLOGY OF THE EASTERN ADRIATIC", UNIVERSITY OF ZADAR
DEPARTMENT OF HUMANITIES, JURAJ DOBRILA UNIVERSITY OF PULA, MATETIĆA RONJGOVA 1, 52100 PULA, CROATIA
valentinazovic3@gmail.com

Your Radiocarbon Results Our Expertise All in your Pocket



- High-quality results within 2-14 business days
- Consultation before, during and after analysis



Beta Analytic
Radiocarbon Dating
Since 1979

Discover the
BETA app for free at:
radiocarbon.com/app



NOTES

A series of horizontal dashed lines for writing notes.

