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International Symposium on Archaeometry

Lisbon, 16th – 20th May 2022

Pottery raw material sources at the multi-period archaeological site of Jagodnjak – Krčevine, Croatia

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The tradition of studying archaeological pottery in Croatia is deeply rooted in the cultural-historical approach, especially when it comes to prehistoric pottery. However, turning the approach by studying ceramics throughout its life cycle, from the selection of raw material, through the various stages of production, to distribution and use, can provide valuable research contributions to a topic that has not yet been fully explored. Therefore, a five-year project focusing on the study of prehistoric pottery traditions in Croatia was launched in 2021. A large-scale systematic archaeometric research programme will be combined with macroscopic physical forms of investigation of previously excavated pottery.

The paper presents the preliminary results of a case study focused on the multi-period (Neolithic, Bronze Age, Iron Age, Roman, Mediaeval) archaeological site of Jagodnjak – Krčevine. Ceramic petrography, X-ray diffraction analysis and field sampling is used to identify the characteristics of archaeological ceramics and to determine the provenance, availability, and types of raw material used for the production of ceramics in the different periods of the past. In order to obtain an optimal data set related to the provenance of raw materials, a field survey was conducted. Field sampling was established according to zones with different distances from the archaeological site and in accordance with the characteristics of the lowland landscape. Comparison between XRD data of clayey material and pottery, and data obtained by optical microscopy suggests the location of the raw material source.

Preliminary results of the archaeometric analysis indicated that raw material was probably collected in the vicinity of the settlement, during all periods of the past recorded at the site. However, certain preferences were observed, concerning not only the tempering material used, but also the choice of raw material sources and clay processing, that match different communities. Such diversity in the choice of raw materials indicates not only technological but also different patterns of landscape use over time.

DAY 2 – May 17th, 2022 – Tuesday

Session chair: M. Isabel Prudêncio		
09:00 – 09:30	Invited lecture S8-001.486	Heritage Science at the Budapest Neutron Centre <u>Kasztovszky, Zs.</u>
09:30 – 09:50	S8-002.200	Neutron tomography - a tool to virtually unwrap folded lead amulets <u>Mannes, D.</u> , Wilster Hansen, B., Kutzke, H., Ødeby, K., Langsholt Holmqvist, K.
09:50 – 10:10	S8-003.222	Non-destructive and position selective elemental analysis method using negative muon <u>Ninomiya, K.</u> , Kubo, M.K., Miyake, Y., Shinohara, A., Saito, T.
10:10 – 10:30	S8-004.237	Lipari Obsidian and Neolithic communities: new chronological elements through fission track dating <u>Bonizzoni, L.</u> , Balestrieri, M. L., Coltelli, M., Guglielmetti, A., Manni, M., Martinelli M. C., Oddone, M.
10:30 – 11:00	Poster Session (S5 + S8) / Coffee-break	
Session chair: Zsolt Kasztovszky		
11:00 – 11:20	S8-005.193	Complex analytic researches of a Medieval enamelled Bronze pendant from Rus' <u>Zaytseva, I.</u> , Stolyarova, E., Kovalenko, E., Podurets, K.
11:20 – 11:40	S8-006.794	Non-destructive depth profile mapping tool at the New AGLAE facility <u>Pacheco, C.</u> , Pichon, L., Holé, C., Lemasson, Q., Moignard, B., Chapoulie, R.
11:40 – 12:00	S8-007.873	Ceramic body of tiles characterization by means of Ion beam analytical techniques <u>Corregidor, V.</u> , Dias, M.I., Prudêncio, M.I., Alves, L.C.
12:00 – 12:20	S8-008.330	Applying neutron techniques to the earliest Large Hollow-cast bronze statues from Ancient Egypt <u>Perucchetti, L.</u> , Fedrigo, A., O'Flynn, D., Craddock, P.T., Taylor, J., Shearman, F., Hook, D.R.
12:20 – 12:40	S8-009.3004	'To be or not to be Della Robbia, that is the question': methods of analysis in art history and archaeometry in the study of 16th century Italian sculptures <u>Flor, P.</u> , Dias, M. I., Rodrigues, A. L., Prudêncio, M. I.
12:40 – 14:00	Lunch	
Session chair: M. Isabel Dias		
14:00 – 14:20	S5-001.126	Continuity and change in indigenous ceramic recipes in the Lesser Antilles across the Historical Divide <u>Stienaers, A.</u> , Degryse, P., Hofman, C.