



**Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION V
New Frontiers in Multifunctional Material Science and Processing**

**Serbian Ceramic Society
Institute of Technical Sciences of SASA
Institute for Testing of Materials
Institute of Chemistry Technology and Metallurgy
Institute for Technology of Nuclear and Other Raw Mineral Materials
School of Electrical Engineering and Computer Science of Applied Studies**

PROGRAM AND THE BOOK OF ABSTRACTS

**Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 21st-23rd September 2016.**

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The cooperation of the Faculty of Technology, University of Novi Sad, with the institutions of protection of cultural heritage and other relevant stakeholders in the field of characterization of historic materials, development of new advanced materials, their in-situ application and monitoring, represents a good example of multidisciplinary approach to implementation of national and international initiatives. As spin off outcomes of this cooperation the new teaching course *Materials in Cultural Heritage* was introduced on the master level of studies and a new *Laboratory for Materials in Cultural Heritage* established. This way it is given the multidisciplinary and intersectoral contribution to the protection of objects from degradation, while preserving the authenticity, functionality and aesthetic values, taking into account social and economic aspects. This approach serves as a good example of linking experts involved in cultural heritage that comes from variety of fields including education, research, culture, tourism and economy. It enables them to better understand each other, the needs of different disciplines and approaches, and brings shared responsibility in preservation of the cultural heritage in our country.

INV13

Characteristics of Mortar from the Archeological Site Romuliana – Gamzigrad

Gordana A. Topličić-Ćurčić¹, Ana J. Momčilović-Petronijević¹, Vojislav V. Mitić^{2,3},
Vesna V. Paunović², Dušan Z. Grdić¹, Nenad S. Ristić¹, Zoran J. Grdić¹

¹University of Nis, Faculty of Civil Engineering and Architecture, 18000 Nis, Serbia,

²University of Nis, Faculty of Electronic Engineering, 18000 Nis, Serbia

³Serbian Academy of Science and Art, Institute of Technical Sciences, 11000 Belgrade, Serbia

Felix Romuliana is a palace erected during the reign and after the design of the Emperor Gaius Valerius Galerius Maximianus. It belongs to the category of monuments of Roman court architecture which is associated with the time of Tetrarchy. During the archeological excavations, two fortification systems were discovered, the younger outer system with twenty polygonal massive towers, and an older inner system with sixteen towers of quadrangular and octagonal towers flanking the gates. The younger outer fortification is polygonal. The communication east-west connecting two gates divides interior space into two entities. Systemic archeological research last since 1953 by probing the northwest part of the inner space. Conservation works run simultaneously with the excavations. Mortar samples were taken from the towers XI and XII of the old fortification, as well as from the tower 15 and the part of the rampart between towers 1 and 3 of the younger fortification. Mortars were analyzed with the goal of obtaining information about morphological, mineralogical, chemical and basic physical properties of mortar. For analysis of these properties, optical microscopy and scanning electronic microscope were used. Depending on the location sampled mortars, there are differences of individual properties of mortar. The optical examination of macroscopic appearance of mortar samples indicated that those are limestone binder mortars. Aggregate grains are both river and stone aggregate. Mortar porosity differs depending on the location where samples were taken.