

The domes of the Amalfi Coast: survey and digital representation of complex shapes

Vincenzo Iannizzaro¹, Salvatore Barba², Barbara Messina³, Pierpaolo D'Agostino⁴, Fausta Fiorillo⁵

Abstract To know the historic and cultural heritage it is especially interesting the group of domes, which characterize Salerno and the Amalfi Coast.

This system displays several differences, which have to be researched if we want to achieve a deep knowledge of the architectural heritage typical of this territorial context. From metric data acquired as 3D cloud points and filed as informative systems it also has been possible to develop geometric and formal researches to propose digital models of the analyzed domes.

The presented research intends to act in two guiding principles:

- to verify, in the field of digital representation and storage of architectural heritage, the capabilities of methodologies used for the RGB point clouds scanning;
- to implement data and images scanned with an analysis and a visualization procedure, based on digital instruments in which the multiple levels of information space can explain the quantitative and qualitative relations beyond the objects themselves.

Keywords 3d scanning, digital representation, storage informatic system

¹ Vincenzo Iannizzaro, associate professor of Drawing, University of Salerno, Faculty of Engineering, Department of Civil Engineering, Italy, v.iannizzaro@unisa.it

² Salvatore Barba, assistant professor of Drawing, University of Salerno, Faculty of Engineering, Department of Civil Engineering, Italy, sbarba@unisa.it

³ Barbara Messina, assistant professor of Drawing, University of Salerno, Faculty of Engineering, Department of Civil Engineering, Italy, bmessina@unisa.it

⁴ Pierpaolo D'Agostino, PhD in *Ingegneria delle Strutture e Recupero Edilizio e Urbano*, University of Salerno, Faculty of Engineering, Department of Civil Engineering, Italy, pdagosti@unisa.it

⁵ Fausta Fiorillo, PhD student in *Architecture and Urban Phenomenology*, University of Basilicata, ffiorillo@unisa.it