

[e]motion

Graduate Conference on Science
and Technology of the Arts

9–11 DEC 2021

| **Book of Abstracts**



CATOLICA
ESCOLA DAS ARTES

PORTO

Book of Abstracts for [e]motion - 1st Graduate Conference on Science and Technology of the Arts, that took place at Universidade Católica Portuguesa – Porto (School of Arts / CITAR), from December 9 to December 11, 2021.

Edited by the Organizing Committee:

Ana GAGO, Joana GUERREIRO, João Pedro AMORIM, Nádía MOURA

Cover Image: Joana Machado (COLÓNIA)

Special thanks to Universidade Católica Portuguesa, School of Arts, Research Centre for Science and Technology of the Arts (CITAR), Digital Creativity Centre (CCD), Eventos - Católica Porto and the Secretariat of CITAR/EA – UCP.

Organization



CATOLICA
SCHOOL OF ARTS

PORTO



CATOLICA
CITAR - RESEARCH CENTRE FOR SCIENCE
AND TECHNOLOGY OF THE ARTS

PORTO



CENTRO CRIATIVIDADE DIGITAL

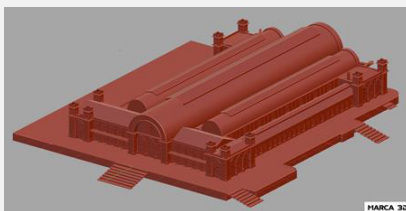
FCT Fundação
para a Ciência
e a Tecnologia

Este projeto é financiado por Fundos Nacionais
através da FCT - Fundação para a Ciência e
Tecnologia no âmbito do projeto UIDB/0622/2020

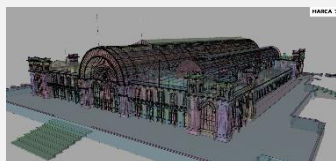


REPÚBLICA
PORTUGUESA

<https://artes.porto.ucp.pt/graduateconference>

Virtual restitution of the Crystal Palace of Oporto (*paper*)

Overview of the Crystal Palace 3D (clay material)



The 3D building model is viewed with the wireframe CG technique

This work is about the virtual reconstruction of the disappeared building of Oporto City, the Crystal Palace, in Portugal. For the people of Oporto is the first “temple dedicated to Portuguese industry” and the “active and entrepreneurial genius of its inhabitants” (Barbosa, 1864). Several studies on the building are known, but in our investigation, we did not find a virtual reconstruction of the Palace with detail and rigour. The first graphic representation of the Crystal Palace of Oporto in Portugal will probably be the engraving published by *Archivo Pittoresco* in 1864. There is a view of the Palace on the first page, and below, in the lower-left corner, the inscription «Nogueira da Silva and Alberto». The first name, Nogueira da Silva, is the designer and the second, Caetano Alberto, is the engraver (Afonso, 2007). The engraving work, presumably made in wood, could have been carried out from a visual drawing, the traditional way. In the same document from 1864, along with the graphic representation, the first reference to the Crystal Palace appears to be made by the historian Inácio de Vilhena Barbosa. In the nineteenth century, the construction of the Crystal Palace wasn't only a wish of local populations. The brief note of *Archivo Pittoresco* journal also contextualizes the position of King D. Pedro V of Portugal as the driving force behind the construction of the building. After about 156 years of the inauguration, the resources for the graphic representation of the built heritage are mainly through computer graphics techniques (Shirley, 2005; Vaughan, 2012). Pixels, digital processing, and renderings made with historical accuracy (Denard, 2009) replace the artwork of engravings and the characteristic of traditional techniques. For this work, it was necessary to implement a synergy between expertise fields well supported with classical documents and digital documentation founded in institutional web resources. The main documents used for the 3D reconstruction (figure 1 and 2) was the historical cartography, the publication “O Palácio de Cristal e a arquitectura do ferro no Porto em meados do século XIX” (Santos, 1989) and the historical photographs from Arquivo Municipal do Porto (Gisa), especially those taken at the time of the building's demolition. In conclusion, understand constructive aspects, structure and aesthetic appearance of the building was a multidisciplinary work. Namely, the register of a virtual reconstruction of a lost structure, like Palácio de Cristal, can be integrated in the field of a new approach to the intangible heritage studies, crossing then with a virtual materiality based on the archaeological method of prospection and interpretation. As a model, but also as a methodological premise, this work can be a starting point to future similar approaches for other digital reconstructive projects of architectural and industrial heritage studies. Finally, to understand the emotional feeling in Oporto culture with the building, it is possible to make a frugal association with the Crystal Palace imaginary. In our opinion, for the local people from Oporto, the Crystal Palace is the same as the Parthenon in the Acropolis of Athens. And for that, the scientific crypto history elaborated it is a collective memory gap that it was essential to fill.

Biographical note

Frederico Henriques is a conservator-restorer and received his PhD in Painting Conservation in 2013 (UCP). He was awarded a PhD and post-doctoral scholarship by FCT. He became an integrated researcher at CITAR (UCP). His research area is digital technologies applied to the Conservation and Safeguarding of Cultural Heritage. **Mário Bruno Pastor** has a degree in History, variant of Archaeology (FBAUP); a post-graduate degree in Contemporary History - Economic Structures and Industrialisation; a master's degree in Cultural Heritage and Tourism, from the Institute of Social Sciences (UMinho). He is currently a researcher at CITAR and a scholarship holder of FCT, doing his PhD in Heritage Studies at UCP / School of Arts.