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(Article begins on next page)

# **ITALIAN SURVEY**

## **NATIONAL & INTERNATIONAL PORTFOLIO**

EDITED BY PAOLO GIANDEBIAGGI AND ANDREA ZERBI

*This digital book has been edited by the association UID - Italian Union of Drawing, on the occasion of the XXXVI International Conference of the Teachers in Representation (Parma, September 18-20, 2014). It collects the most significant survey experiences conducted by the Italian university researchers, both nationally and abroad. It is meant to enhance and disclose the Italian know-how in the world.*

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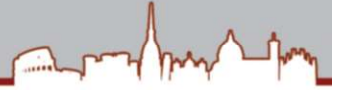
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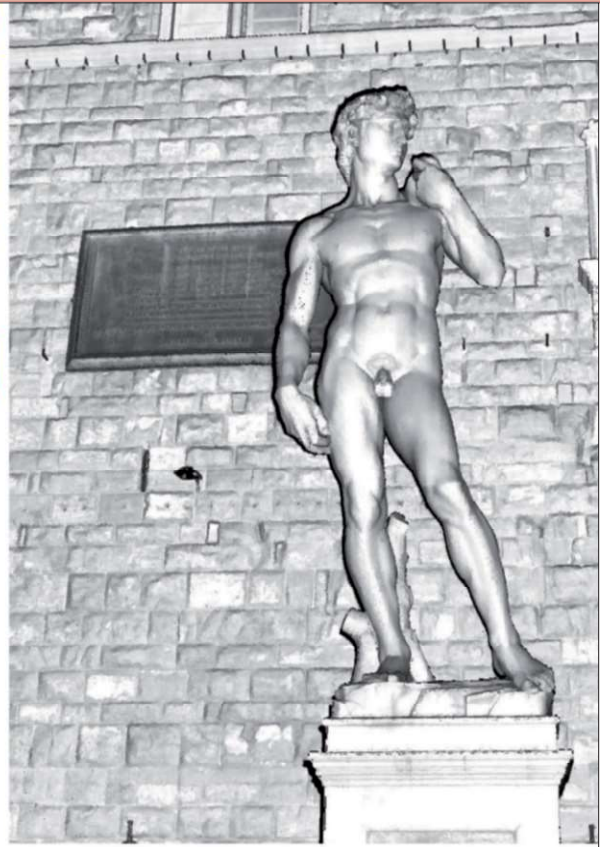
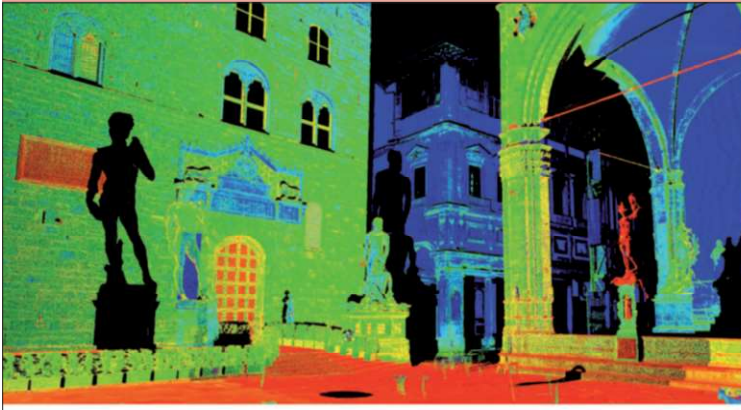
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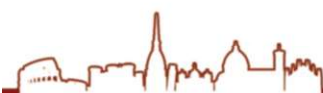
**DOCUMENTATION OF UNESCO HERITAGE HISTORICAL CENTRE**  
ITALY - TOSCANA - FIRENZE

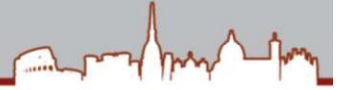
**N.24**



*The general aim is to create a comprehensive digital documentation of the Historical Centre of Florence, recognized as an UNESCO World Heritage Site. The data acquisition is done through direct and digital survey, using 3D laser scanning and photogrammetric techniques, taking care about the representation as a meaningful step after the survey and considering it as an act of knowledge. The ongoing activities are part of the documentation of the digital database, composed by 2D drawings, 3D models and details of the main monuments and their environment.*

RESPONSIBLE: G. Anzani, B. Aterini, M. T. Bartoli, S. Bertocci, C. Biagini, C. Crescenzi, C. Luschi, P. Puma, A. Merlo, M. Scalzo, G. Verdiani  
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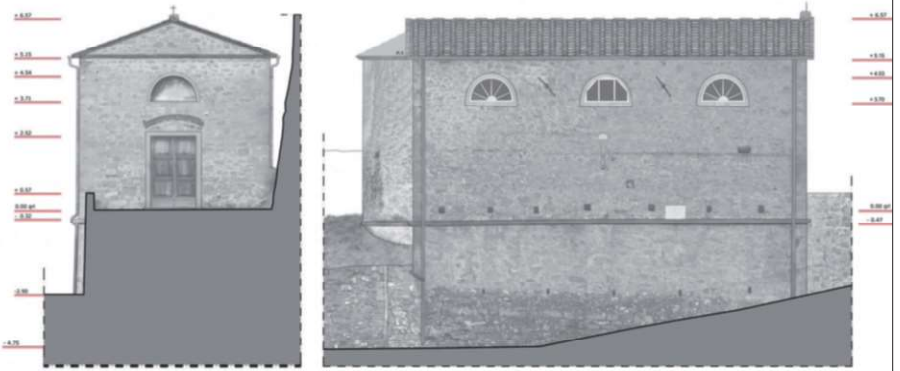




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**SURVEY AND DOCUMENTATION OF THE SETTLEMENT**  
ITALY - TOSCANA - SORANA DI PESCIA (PT)

**N.34**



*The Sorana project (2009-2011) provided the integrated survey of the entire settlement in a survey campaign five days lasting. The research has been conducted with the aim of enforcing the integration between the various scientific ambits involved in the project (history, archeology, architecture, geology, iconology) and making available the results of the studies in editable format. The results provide an essential basis to promote actions of preservation and enhancement of existing heritage.*

**RESPONSIBLE: Alessandro Merlo, Giorgio Verdiani**

**PARTICIPANTS:** Alessandro Merlo, Giorgio Verdiani, Gaia Lavoratti, Elisa Bechelli, Giovanni Benvenuti, Elisabetta Del Grande, Cinzia Jelencovich, Giulia Galeotti, Erica Ganghereti, Francesca Grillotti, Francesco Tioli, Alessandro Peruzzi, Federico Andreazzoli, Antonino Meo, Ilaria Agostini, Sara D'Amico, Duccio Troiano, Massimo Zucconi, Massimo Gasperini, Emanuele Pellegrini, Serena di Grazia





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**THE WATERFRONT: CORSO TAGLIAFICO, VIA GARIBALDI AND VIA XX SETTEMBRE**  
ITALY - SARDEGNA - CARLOFORTE (CA)

**N.86**



- |   |  |   |
|---|--|---|
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|---|--|---|

*The target of the project (2009), developed inside the "Azioni Integrate Italia-Spagna" activities, is to find constants and variables in the architectonic and urban environment between Carloforte and other settlements built by the people of "Tabarchini". Starting from a detailed survey and documentation campaign carried out using the contemporary technologies based on laserscan and digital imaging it's possible to develop a rich archive of information and to start the analysis and the comparison about these Mediterranean settlements.*

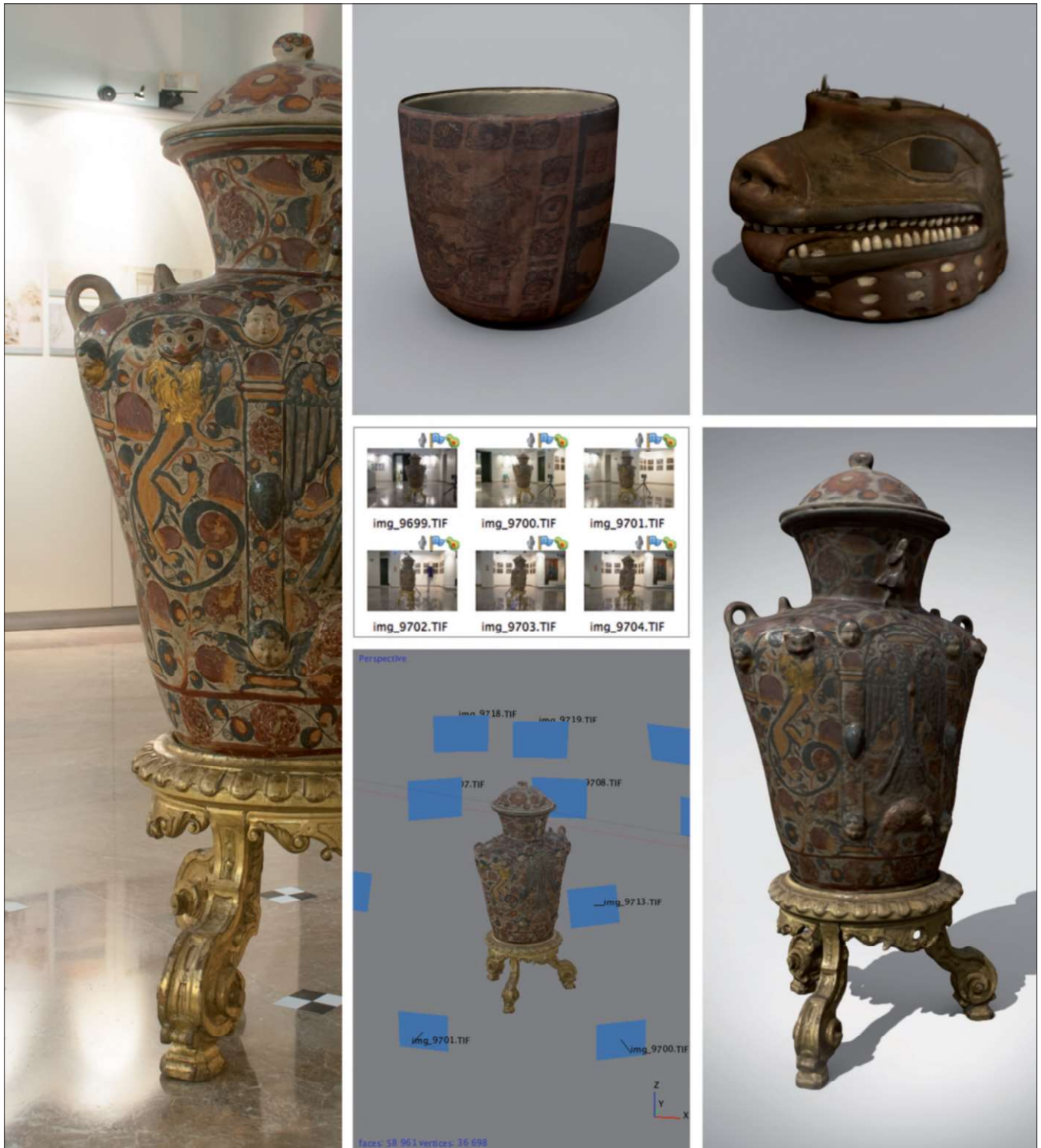
RESPONSIBLE: Alessandro Merlo, Giorgio Verdiani, Francisco Juan Vidal  
PARTICIPANTS: Alessandro Merlo, Giorgio Verdiani, Gaia Lavoratti, Filippo Fantini, Uliva Velo, Stefania Iurilli, Alice Caporali, Andrea Caporali, David Croce



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**THE "VIRTUAL" COLLECTION OF THE MUSEO DE AMERICAS**  
EUROPE - SPAIN - MADRID

**I.26**



*The project is based on the concept of cultural heritage dissemination. Once obtained geometric and chromatic information with photogrammetric and laser scanner survey of part of the collection of the Museo de Americas in Madrid, they have been rebuilt through reality-based 3D modeling techniques. The main aim of the project is to use reality based models both in analysis of artifacts with innovative techniques and in exploration of new communication methods in order to disseminate the huge heritage kept in museum archives until today.*

**RESPONSIBLE:** Alessandro Merlo, Cristina Vidal Lorenzo

**PARTICIPANTS:** Alessandro Merlo, Andrea Aliperta, Zacarias Herguido Alamar, Gaia Lavoratti, Carlos Sánchez Belenguer

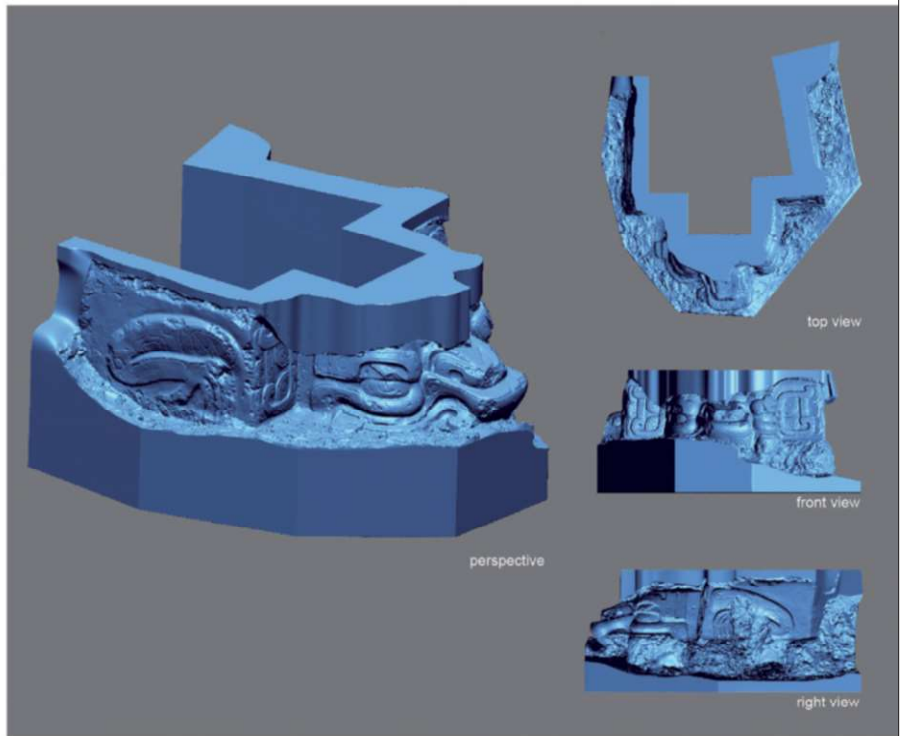
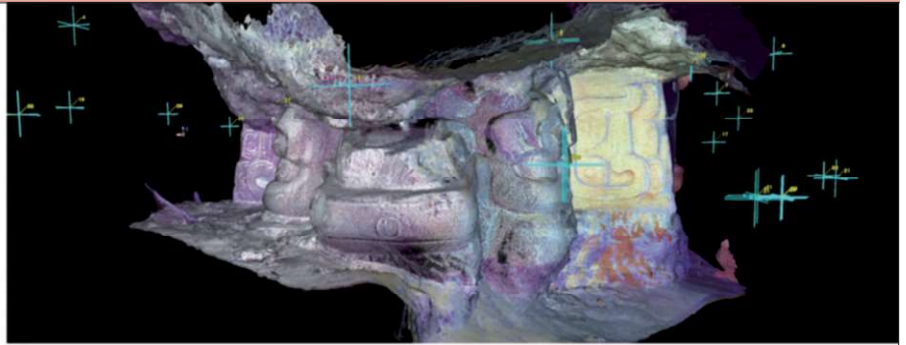


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## THE MAYAN MASCARON

AMERICA - GUATEMALA - CHILONCHE (PETÉN)

1.89



The Mayan mascarón of Chilonché is a zoomorphic sculpture of 4x3 meters. The data gathering was carried out using a laser-scanner in a narrow environment. A high resolution polygonal B-Rep model has been obtained from the initial point cloud. This detailed model allows to study the topology of the sculpture and to replicate it using 3D printing technology. To allow the general public to visualize the mascarón, a low-poly model has been generated in order to be used into an interactive web-based 3D real-time simulation and a virtual cave.

RESPONSIBLE: Alessandro Merlo, Gaspar Muñoz Cosme  
PARTICIPANTS: Alessandro Merlo, Filippo Fantini, Carlos Sanchez Belenguer

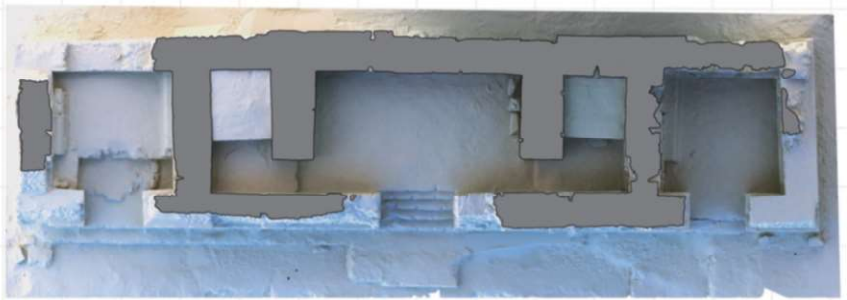
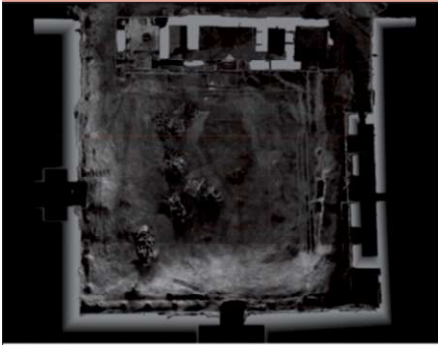




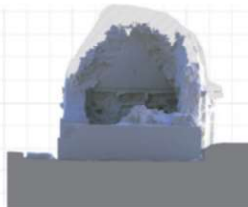
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**ARCHAEOLOGICAL SITES: THE ACROPOLIS**  
AMERICA - GUATEMALA - LA BLANCA (PETÉN)

**I.90**



PLANTA



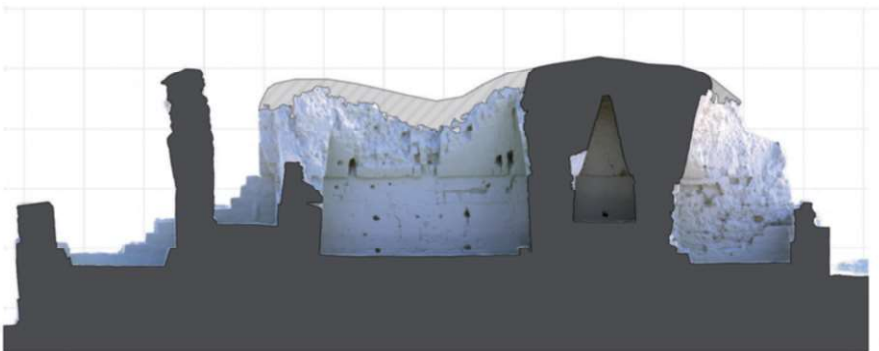
FACIADA SUR



FACIADA NORI



SECCIÓI TRAIKVERSAI



SECCIÓI LI

*La Blanca project (led by Muñoz Cosme G. and Vidal Lorenzo C.) has employed terrestrial laser scanning technology with the purpose of obtaining a more meticulous record of Maya structures for archaeological interpretations. The Acropolis of La Blanca is approximately 45 x 50 m in size and contains two distinct architectural systems: a building block and a U-shaped building. The data collected at the Acropolis in march of 2012 amounted to about 1,350 million points obtained from 45 station positions during two days of work.*

**RESPONSIBLE: Alessandro Merlo**

**PARTICIPANTS: Alessandro Merlo, Jose Leonel López Hemadez, Zacarias Herguido Alamar**



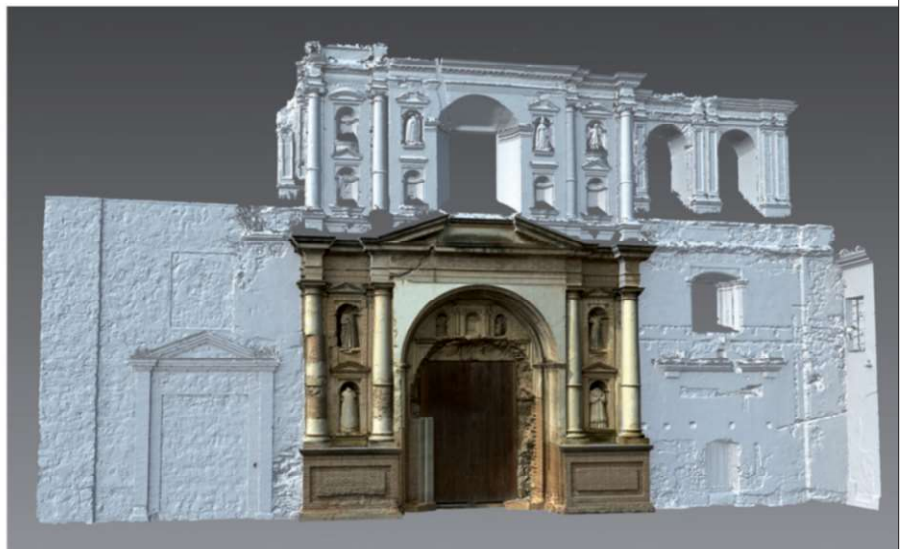
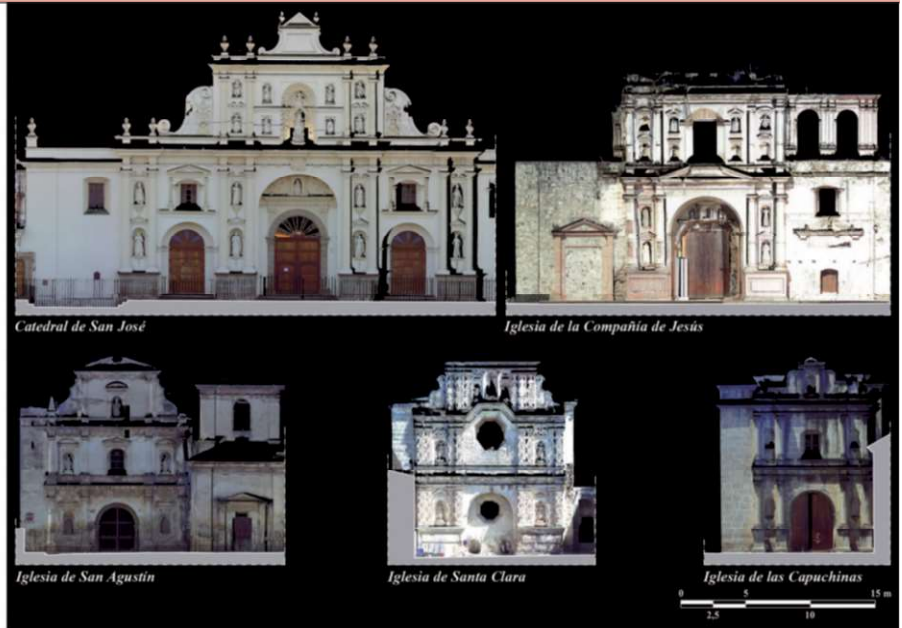


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## RELIGIOUS BUILDINGS

AMERICA - GUATEMALA - SANTIAGO ATITLÁN (SOLOLÁ)

I.91



*The project goals are survey and analyze some significant examples of religious buildings of Antigua Guatemala, characterizing the ancient capital urban landscape, in stylistic and geometric terms. The main aim is to find the archetypes and make assumptions about original appearance of the buildings, deeply damaged (modified) by the repetition of earthquakes in the last five centuries, through anastylosis techniques and virtual reconstructions.*

RESPONSIBLE: Alessandro Merlo

PARTICIPANTS: Alessandro Merlo, Filippo Fantini, Gaia Lavoratti, Andrea Aliperta, José Leonel López Hernández

