

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture (Rehabilitation and Revaluation)
Honors theses

Virtual reconstruction of the School of Athens

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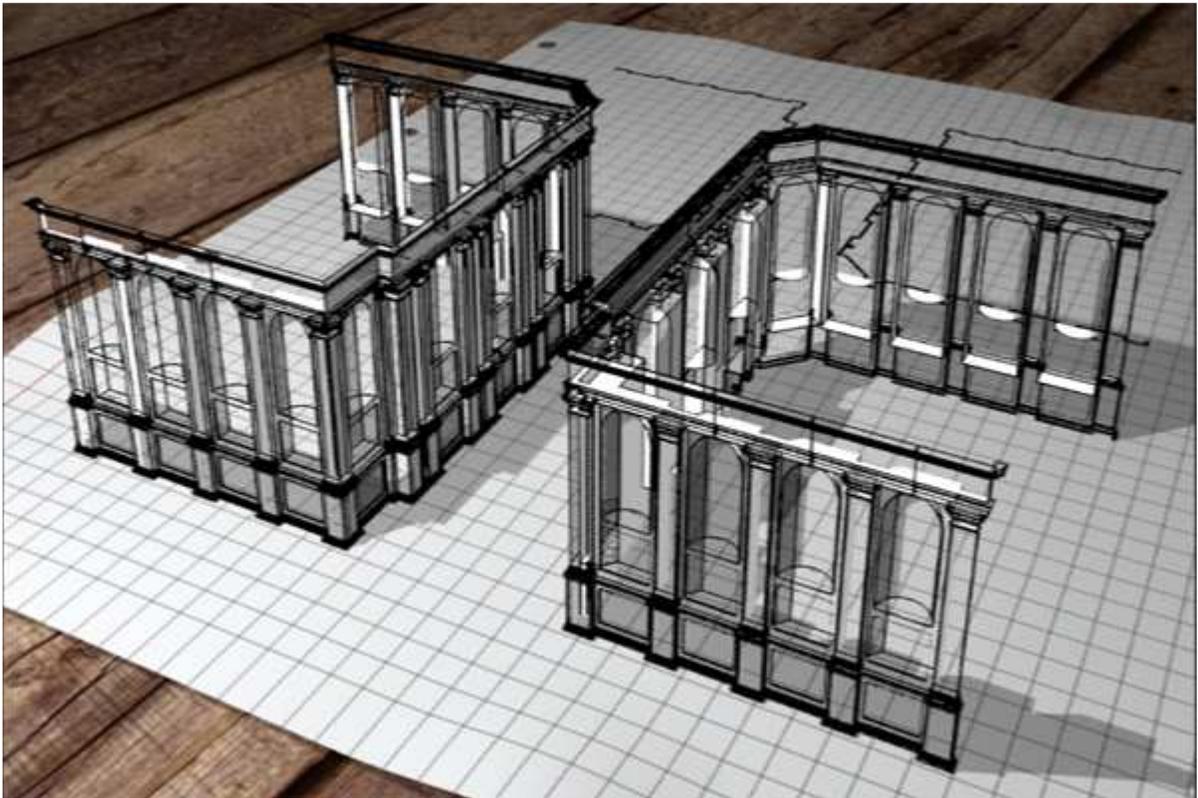
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My work consisted on the three-dimensionally reconstruction of the architecture represented on the background of the Raffaello's fresco "School of Athens", to be able to create different kinds of virtual animations to edit in a video.



Raffaello's fresco "School of Athens"

The "School of Athens" is a famous Raffaello's fresco, of 1509, located inside the Vatican Museums in Rome, in particular on the east wall of the Room of Segnatura. To explain these arguments, I used a video, created using various software: design, 3D modelling, photo editing and video editing software. These software, such as AutoCAD, 3D Studio Max, Photoshop, Premiere, After Effects, etc, allow me to make up an animated reconstruction of the architecture of the "School of Athens", editing with an instrumental track music.



Virtual animation in wired way

I decided to divide the video in three chapters, so as to order the work for arguments and make it more clear.

Three chapters are: "First chapter: Fresco presentation", which is basically structured in two parts. The first part is an introduction to the computer graphic, that is the reproduction of a virtual reality, consisting of objects completely reconstructed by computer.

Instead, the second part, is dedicated to the fresco discovery.

"Second chapter: The comparisons", where I analyzed some architectural elements represented by Raffaello in his fresco, and I formulated some hypothesis on what inspired the artist, that is where Raffaello could have been inspired to draw some details.

Architectural elements analyzed are: 1) hexagons and diamonds to the coffers of the two barrel vaults of the "School of Athens", compared with the coffers of the apse of the Basilica of Maxentius in Rome, 2) the corner solution of the central part of the fresco, that is the part who supports the tambour, compared with one of the huge pillar who supports the cupola of the St. Peter Basilica, 3) the opening can be seen in the center of the tambour, compared whit one of the two serlianas of the Santa Maria del Popolo Bramante's choir, in Rome, 4) the arcade that is in the background of the fresco, compared whit the arcades of the first level of the lower court of the Belvedere Vaticano.

“Third chapter: Virtual Hypothesis”, where is possible to assist at the 3D construction of the architecture of the “School of Athens”, which gradually goes to compose of their elements, shapes and materials, starting from a simple blank paper.



Animation of the shadow of a statue on the marble floor of the “School of Athens”

Non-visible parts of the fresco, because hidden, were reconstructed following the logic of the architectural elements symmetry who characterize this fresco.
In conclusion, the aim of this work is to make three-dimensional a work of art, like the “School of Athens”, which unfortunately is constrained to two dimension, that is height and width, therefore in order to know it, explore it, and enjoy it, every time, everywhere, but above all in a different way, an innovative way.

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