



POLITECNICO  
DI TORINO

# Honors thesis

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COURSE OF  
ARCHITECTURE HERITAGE PRESERVATION AND  
ENHANCEMENT

*Abstract*

**Fortifications on the western border between the world wars. Study of the defence in Valle Stura di Demonte with Digital History method**

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July 2016

In this work the objective was to examine the theme of the defensive walls realised in Italy, on the Alps, between the two world wars. Particularly, the study is about the activity started during the 30s of the XX century that had the purpose to predispose the defense of the national border. This period was characterized by the deterioration of the political situation, which caused the creation of the defensive process.

In Italy, the elements built on this aim represent a patrimony with a remarkable importance, for the multitude of structures and for the variety of their functions and their types.

During the years this cultural heritage has lost a lot of its initial consistency, during the first postwar it went through intense spoliations followed by destructions attributed to different causes. Nowadays the majority of the intact patrimony is going more and more in to a state of abandon, it often turns out to be improbable access and even the perception of this value is frequently difficult.

The lack of visibility is caused by characteristics of the fortifications, they are frequently partially underground, concealed or completely constructed under the rock, disguising the perception of their existence.

The historical value of this landscape, that creates the strong interdependence between the human intervention and the natural environment, depends on the great number of defensive structures and the strong connection with the context in which they are created.

The intent of this work is to point out this patrimony, make the people know it, and permit a requalification and an esteem of this cultural heritage.

The territory is very extended, so the attention is focused on a restricted area: "Valle Stura di Demonte" in the south of Piedmont.

The analysis is about the elements that constitute the totality of the "Immobili di demanio pubblico inerenti la difesa dello Stato", so are they defined from the "Genio Militare".

Overall the structure are 250, in which 100 belong to the typology "Opera", fundamental principle, midpoint of the entire defensive organisation achieved during the 30s.

The historical research has been done with diverse digital instruments. The major contribution was the realisation of a project GIS, in which the collected data, from various sources were analysed. This project permits an easier vision of the totality of the phenomenon.

A further important contribution come from a 3D modeling, applied to some works, making visible the hidden part of the fortifications.

This process has been applied to a more delimited area, particularly to the "gola delle Barricate" in which the defensive elements develop within the rock walls, making the perception of their size almost impossible.