



POLITECNICO  
DI TORINO

# Honors thesis

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ARCHITETTURA PER IL PROGETTO SOSTENIBILE

*Abstract*

**HIGH ALTITUDE ARCHITECTURE, A PROJECT OF THE  
REFURBISHMENT AND ENLARGEMENT VITTORIO  
EMANUELE II HUT, LOCATED IN THE GRAN PARADISO  
NATIONAL PARK.**

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The Vittorio Emanuele II hut is immersed in the Gran Paradiso National Park at 2732 m, the Ciarforon and other summits in the mountain range and can be reached in two hours on foot from Pont di Valsavarenche, is one of the most popular destinations of the Quattromila of Valle d'Aosta, as it is the main point for the ascents to the Gran Paradiso. The original structure was built in 1932-33 by architect Armando Melis De Villa. It was to be completed in 1943, When the war started, the project was stopped and then finally it has been inaugurated on 1961.

The design and choice of enlargement was decided to maintaining and enhancing the original historical building and removing the additions through the years, to achieve the original volumetric situation. To do this I need to free up the historical hut from every structural and prefabricated bodies added during the previous years.

The enlargement project is a simple volume, in which the verticality defines the identity of the building , and seeks complementarity with the horizontal volume of the existing hut. I tried to use in this new building a formal abstraction with the minimum of materials used: facades and roof are designed in Rhenzink and the load-bearing structure was designed entirely in wood as a pillar beam construction system in different prefabricated modules and transportable at high altitude with the helicopter. The wall, floor and roof elements, made in this way, can be produced in the factory at different prefabrication levels and assembled on site; this allows very rapid assembly and another advantages such as architectural freedom and excellent winter thermal insulation.

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