

PhD Civil and Environmental Engineering

Research Title: The culture of the built heritage for the recovery of the Modern Movement architecture.

Funded by	Politecnico di Torino - DISEG
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Context of the research activity	<p>The research is part of the consolidated national and international "Modern Recovery" scientific current, which involves the interests of a large part of the ICAR 08 / C1 Building Technology and Integrated Building Design disciplinary sector and ICAR / 10 Building Technology and Details selecting sector .</p> <p>The Modern Movement buildings recovery is fully part of the history of engineering and constructions, with a special consideration for techniques and materials.</p> <p>Today, with a view to minimizing the land consumption, most of the actions in construction field is aimed at the recovery and conservation of buildings, that is: the new city is no longer to be built but the main focus is made to repair the already existing city.</p> <p>In this specific scenario, the heritage of the Modern Movement acquires a new strategic value. After years of evident neglecting and clear tendency to oblivion, the material legacy of this season of thought - at first glance almost invisible and, above all, unrecognizable due to lack of historical distance - appears in all its evidence and it begins to fully grasp its significance and cultural importance.</p> <p>The investigation, both on the reasons why this renewed interest arose, both on the causes that generated it,</p>
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	<p>appears almost crucial. Critical review or growth in re-use demand? Not least, among the reasons for the renewed interest, is the strategic location where these buildings and neighbourhoods crop up; conceived to be within the urban fabric and often designed to periphery strips of the city, are now included on areas became semi-central districts, whose position income can also justify high financial commitment restorations. The critical review on Modern Movement material and immaterial heritage need to be motivated by the stems from a series of considerations on the real meaning of the work of art.</p> <p>First of all must be placed the need for witness, be it historical, social, cultural or material.</p> <p>Secondly, the awareness of the irreproducibility of our built heritage in its capacity and of an irreplaceable documentary foundation.</p> <p>Finally, the reasons why the testimonies of this period must be saved and constantly maintained, must be sought in the crucial aim, long promoted by the ecological culture, not to continue along the way of wastefulness of energies and use of non-renewable resources.</p>
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Objectives	<p>The focus is the identification - through the in-depth study of its material and immaterial values, of its contributions in constructive, functional and technological innovation - of the most suitable strategies for the maintenance, conservation or reuse of the heritage built by the Modern Movement, in order to guarantee the current standards of comfort indoor and energy-performance efficiency, required by the changed and constantly changing culture of living.</p> <p>Expected results:</p> <ul style="list-style-type: none"> • Survey of the distinctive features of the Modern Movement architecture on a district, building and detail scale. • Survey of the recurring materials and construction techniques. • Review of European legislation on the subject. • Comparison of case studies on Modern Movement recovery. • Diagnostic analysis of the preservation of whole constructions families and constructive details, during the buildings life and over time. • Abacus with the main causes of degradation. • Guidelines to the management of restorations and re-uses.
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Skills and competencies for the development of the activity

The candidate must be graduated in LM-4 Architecture and Architectural Engineering; LM-23 Civil Engineering; LM-24 Engineering of building systems; LM-24 Building Engineering (DM270).

He must have knowledge of the history of construction techniques, with specific attention to the material heritage of the Modern Movement; notions of design and recovery and conservation of buildings.

He must also have gained undisputed experience in the field of scientific and technological research. The candidate must also have the ability to read the archival sources, to analyse the design drawings and to interpret the legislation.

Finally, a good knowledge of English is required, both spoken and written.