

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

---

**A GIS based knowledge project on cultural heritage: documentation and systemic investigation capabilities for the restauration of St. Vito Chapel in Grugliasco**

by Cristina Monaco

Tutor: Matteo Panzeri

Co-tutors: Carla Bartolozzi and Angela Farruggia

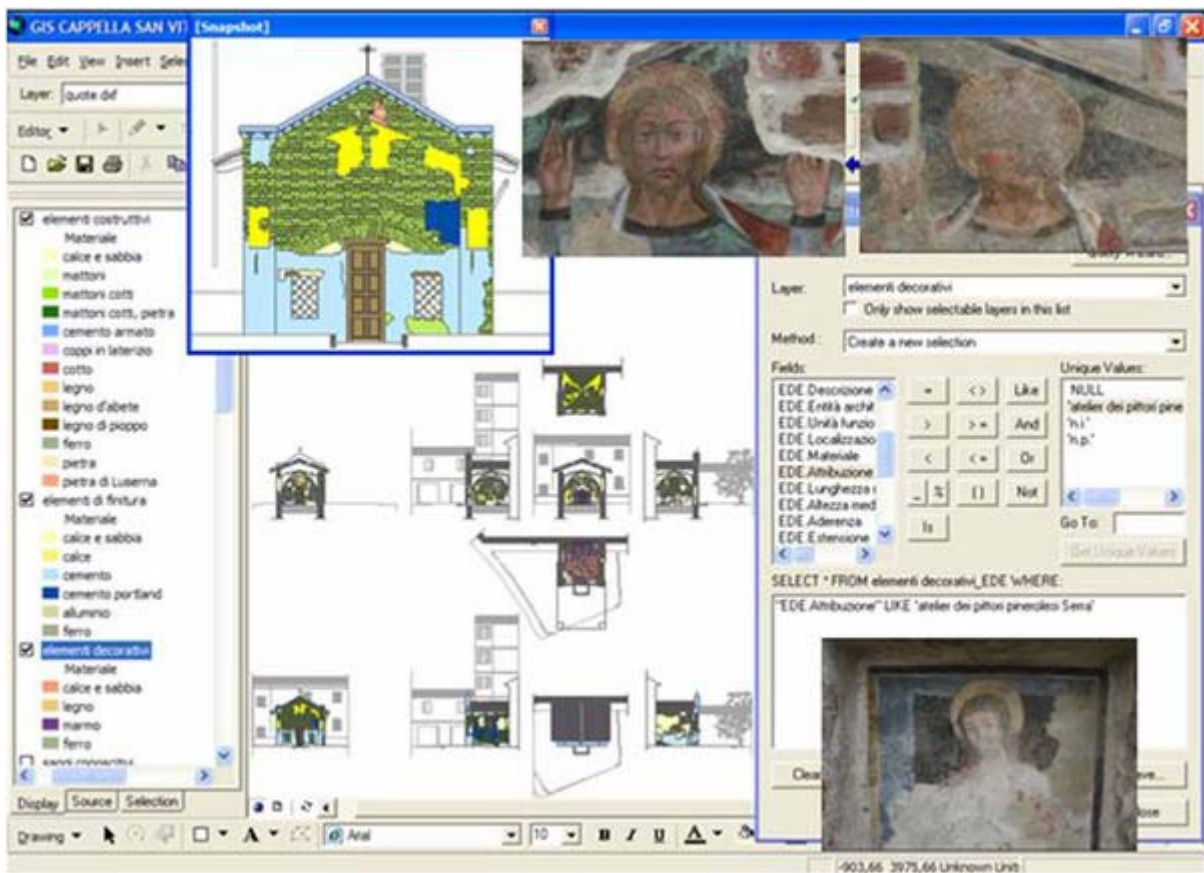
The goal of this research is to critically assess the documentary potential and the spatial analysis of GIS applications with historic purposes as a tool for supporting the study and restoration activities.

The spacial informative system that was realized through this study, in territorial and architectonic scale, has studied the medieval St. Vito's chapel in Grugliasco, also in relationship to its territorial historically stratified context. In particular, the chapel, which is important for its frescoes but also for its location at the limits of the ancient nucleus area, on a bealera and near a crossroad as a systemic element of communitarian and religious activities, is being analyzed as an object of historic sedimentation of almost six centuries and to which the recent restoration has tried to give back the polisemic aspects.



Outside of San Vito's chapel that emphasizes the degradation before the restoration interventions

Currently, Grugliasco's urban settlement is going through a significant transformation and the architectonic and urbanistic patrimony, known very little by the local community and therefore almost neglected, is calling for absolute attention when looking at the burning threat of losing important sites witnessing from the past. In this particular context, the study focuses on the role that different tools for documentation can play in order for the value of such historic buildings, with their infrastructural, landscape and environmental context, to be effectively culturally enhanced and emphasized. The historical-documentary approach, supported through an experimental application of Geographic Information System (GIS, or more properly, Spatial Information System, SIS), has allowed the realization of distributive analyses of phenomena that have been reproduced in thematic maps.



400's frescoes attributed to the atelier of the Serra family, painters from Pinerolo

In the effort of placing the requalification of the Chapel in a much broader project of enhancement and redefinition of the identity of the community, the study has demanded the optimization of a research method critically sifted through the selection and the analysis of the documentation sources. The use of conceptual design, used in a rigorous way, has let the creation of two conceptual models, to territorial scale and to architectural scale, which are essential for the proper use of technological tools. The peculiarity of this work is its systemic character, which place the on-going restoration activity of a single building within the system of religious buildings pre-existing on the same territory: all the aspects of the intervention, even the tiniest ones, can therefore be potentially visualized in virtual space dimensions.

In the research, St. Vito chapel's drawing, which has been appropriately redesigned to identify and isolate singular units (from the metallic bracket to the 400's fresco, etc), is being used as a base map to which multiple descriptive and qualitative information are being associated to. A series of attributes are referred to every single element in an unequivocal manner. From the graphic representation, it is possible to directly query the data archive, using SQL language, and get information such as the stratigraphical units, the structure's materials, the different types of degradation or the chronology of restoration and consolidation interventions within the area of interest as well. The GIS is then being exploited as a powerful and dynamic tool for thematic representations.

The punctual case inside of a system could become a good case of comparison for conservation and valorization actions aimed at the safeguard of cultural patrimony.



Location on Grugliasco's landscape of all chapels that are in bad degradation conditions

For further information, e-mail:

Cristina Monaco: [monacocristina@libero.it](mailto:monacocristina@libero.it)