

Mission

The course is part of the multidisciplinary project “Laboratory of Places”, involving the Politecnico di Milano and Canova Association in partnership with national and international centres of high training collaborating in a series of summer workshops.

The workshop is supported by **ICOMOS Italia** (International Council on Monuments and Sites) and **ISPRS** (International Society for Photogrammetry and Remote Sensing) and **Ente di Gestione dei Sacri Monti**.

The mission of “Laboratory of Places” is to combine **geomatics techniques** and restoration for interdisciplinary knowledge and the preservation of historical and architectural heritage.

During this edition, the case of study will be some building of the **Sacred Mount Calvary of Domodossola**.

The main topic of the school is the **survey techniques** designed for three-dimensional modeling of ancient buildings and the extraction of all metric information useful in planning reconstruction, restoration, maintenance and conservation of cultural heritage.

The participants, divided into groups, will deal with 3D surveying of the building, the extraction of metric and material information from the acquired data with the aim to understand the original morphology and provide material for a preliminary project for the recovery and reuse of the structure.

The aim of the course is to provide the minimum theoretical tools and insights on latest techniques, with day and evening workshops. Practical activities will be structured so that each participant can experience first-hand the various survey techniques using a variety of equipment and software. The major focus will be on operational issues related to the measurement technique using TLS (Terrestrial Laser Scanner), the processing of the acquired data for the extraction of plans, sections and the creation of 3D models. Simultaneously, aerial (with UAV) and terrestrial close range photogrammetric methods will be presented, focusing the training activities on three-dimensional reconstruction of the site from images and the production of photogrammetric classics such as orthophotos.

A special day will be reserved for the ultimate innovative 3D survey techniques “portable mobile mapping systems” offered by Leica Geosystems, partner and sponsor of our summer school. It is not a commercial event, but a technological one where participants will assist to a real survey using the Leica Pegasus:Backpack and working using the acquired data.



Theoretical notes on architecture in the Ossola area, on construction techniques and use of traditional material will also be highlighted. Understanding building materials and the identification of ancient building techniques are very important also during the survey phase in order to plan and design the right measuring activities and representation methods.

The photos on this flyer refer to previous editions of the summerschool.

Recipients

The course is open to students of architecture, archaeology and engineering as well as professionals in Cultural Heritage and the Historic Preservation sector. The “Laboratory of Places” can be a valuable source for those interested in deepening their own understanding of the latest survey and representation methods as well as their utilization in a contemporary business practice.

Summer school program

The program includes both practical and theoretical lessons. Main topics involving in-depth study will be 3D Survey Techniques applied to Cultural Heritage:

- **TLS (Terrestrial Laser Scanner) instrumentation**
 - **Close Range Photogrammetry techniques for architecture**
 - **UAV Photogrammetry**
 - **Close Range Photogrammetry techniques for decorations and little objects**
 - **Mentions of classical survey techniques (Total Station, GPS)** are also programmed as fundamental support in the architectonic survey.
- During the course data will be elaborated on field in order to assure complete training for the students.

Full days seminars:

“A travel into the Ossola architecture”
Dr. Maurizio Cesprini

“Advanced basics of photography aimed for Cultural Heritage Survey”
Dr. Geert J. Verhoeven

“Pegasus Mobile:Backpack - New technologies of mobile mapping”
Dr. Simone Oppici



MAXIMUM NUMBER OF PARTICIPANTS: 25

During the school, the participants will be divided into groups. The final evaluation consists in a public presentation of the group work and it is scheduled on the last day of the workshop. All course participants are encouraged to bring a personal laptop (with a mouse) and a digital camera.



Tutors

Prof. Cristiana Achille
Professor of Architectural Survey
Politecnico di Milano – ABC Dep. - 3D Survey Group, Milan, Italy
Prof. Francesco Fassi
Professor of Architectural Survey, Topography and Photogrammetry
Politecnico di Milano – ABC Dep. - 3D Survey Group, Milan, Italy
Eng. Ph.D. Fausta Fiorillo

Professor of Graphic Representation
Politecnico di Milano – ABC Dep. - 3D Survey Group, Milan, Italy
Arch. Ph.D. Alessandro Mandelli
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Dr. Marta Caroselli
Researcher
SUSSI - Department of the environment, construction and design, Lugano, Switzerland

Dr. Geert J. Verhoeven
Researcher - LBI for Archaeological Prospection & Virtual Archaeology
Ludwig Boltzmann Gesellschaft GmbH - Austria

Prof. Richard Laing
Professor of Built Environment Visualisation
The Scott Sutherland School of Architecture & Built Environment Robert Gordon University, Aberdeen, UK

Ken Marquardt
Canova Association President
Dr. Maurizio Cesprini
Canova Association

Dr. Elena De Filippis
Director of “Ente di gestione dei Sacri Monti”

With the welcome support of:
Eng. Arch. Maurizio Di Stefano
ICOMOS Italia President
Prof. Stefano Della Torre
Director of A.B.C. Dep.
Politecnico di Milano – ABC Dep., Milan, Italy



Organized by:
Politecnico di Milano
A.B.C. Dep. - Architecture, Built Environment and Construction Engineering

School directors: Francesco Fassi, Cristiana Achille, Ken Marquardt

Registration form

To be delivered or shipped **WITHIN 30 April 2018** to the secretariat of the course (via email) together with a CV.

I authorize the inclusion of my data in your computer files, in accordance with the provisions of the law on the protection of personal data.

I authorize to use my personal data to send communications on continuing education courses and the development of a statistical survey. At any time, in accordance with Legislative Decree 196/03. I can still have access to my data, request the modification or cancellation.

YES NO

FIRST NAME: _____

SURNAME: _____

DATE AND PLACE OF BIRTH: _____

EDUCATION: _____

C.F. / IVA: _____

TITLE : _____

SOCIETY: _____

ADDRESS: _____

CAP: _____

TOWN: _____

PHONE: _____

MOBILE PHONE: _____

EMAIL: _____

DATA: _____

SIGNATURE: _____

Important Dates:

Workshop date: 23.07.2018 - 01.08.2018

Registration before: 30 April 2018.

Communication of acceptance: 15 May 2018

Venue:

The Sacred Mount Calvary of Domodossola (also known as Sacro Monte Calvario) is a Roman Catholic sanctuary on the Mattarella Hill, overlooking Domodossola (Piedmont, northern Italy). It is one of the nine Sacri Monti of Piedmont and Lombardy, included in the **UNESCO World Heritage list**.



Registration fee: **650€**

It includes fullboard accommodation at Sacred Mount Calvary of Domodossola. The fee is so divided in two parts:

- **250€** to be paid to Politecnico di Milano at registration acceptance communication
- **400€** to be paid to the Canova Association at the summer-school opening day

For further information please contact:

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... or see the web sites.

<http://www.sitech-3dsurvey.polimi.it/>

<http://www.canovacanova.com>

Facebook: <https://www.facebook.com/laboratoriodeiluoghi/>

Laboratory of Places 2018 History, Survey, Evolution

Summer School: Surveying Cultural Heritage
7th Edition

Sacred Mount Calvary of Domodossola

July 23rd to August 1st, 2018



Promoters:



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