

## The mission

The course is part of the multidisciplinary project 'Laboratory of Place' involving the Canova Association and the Polytechnic of Milan in partnership with national and international centers of higher learning collaborating in a series of summer workshops.

"Laboratory of Place" proposes experimental techniques and methods for interdisciplinary knowledge and the preservation of historic and architectural heritage of the Ossola Valley area.

The three main areas of focus:

- Geometric survey techniques (main topic of the course) designed for three-dimensional reconstruction of ancient buildings and the extraction of all metric information useful in planning reconstruction and restoration.
- Understanding building materials.
- The identification of ancient building techniques.

The object of the study is a stone building in the abandoned village of Ghesc. The participants, divided into groups, will deal with 3D surveying of the building, the extraction of metric and material information from the acquired data information with the aim to understand the original morphology and provide 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 evening workshops. Theoretical notes on architecture in the Ossola area, on construction techniques and use of traditional materials will also be highlighted. 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, close-range photogrammetric methods will be presented, focusing training activities on three-dimensional reconstruction of the site from images and the production of photogrammetric classics such as photo-plans and ortho-photos.

Knowledge of the natural and artificial stone materials will be deepened through the petrographic and mineralogical characterization and through the study of the causes of degradation mechanisms. In particular, the analysis of ancient mortars and plasters will allow the determination of the characteristics and the origin of their components, a useful support for the study of material culture.

## Recipients

The course is open to students of architecture, archeology and engineering as well as professionals in Cultural Heritage and the Historic Preservation sector.

The Laboratory of Place can be a valuable source for those interested in deepening their own personal understanding of the latest survey and representation methods as well as its utilization in a contemporary business practice.

## The summer school program

*Date and Location: July 27 to August 5, 2015 in Ghesc*

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 and Close Range Photogrammetry techniques.

Analysis will be carried out of ancient plasters and mortars for the determination of original construction procedures.

During the course data will be elaborated in the field in order to assure complete training for the students.

Scheduled evening seminars:

### Ken Marquardt

*"The Canova Association, 12 years of historical continuation"*

### Arch. Paola Gardin – Dott. Maurizio Cesprini

*"Ossola Valley Architecture – Building techniques"*

### Arch. Paolo Volorio

*"Ossola Valley Architecture – History and evolution"*

### Dott. Marta Caroselli

*"Ancient plasters and mortars"*

### Ing. Francesco Fassi

*"Archaeological field survey – new perspectives"*

*"Online visualization techniques – "BIM system for Cultural Heritage"*

## MAXIMUM NUMBER OF PARTICIPANTS: 12

**During the school the participants will be divided into groups.**

**A workstation will be provided for data processing.  
All course participants are encouraged to bring a personal laptop and a digital camera.**

## Politecnico di Milano – Dept. A.B.C.

Prof. Stefano Della Torre

*(Director Dept. A.B.C.)*

Prof. Carlo Monti

*(Full professor of Topography)*

Prof.ssa Cristiana Achille

*(Professor of "Urban and environmental survey, 3D Survey Group)*

Ing. PhD Francesco Fassi

*(Professor of topography and survey techniques, 3D Survey Group)*

Arch. Alessandro Mandelli

*(3D Survey Group)*

Dott. Marta Caroselli

*(University of Modena and Reggio Emilia, Dept. of Chemical and Geological Science)*

Ing. PhD Fausta Fiorillo

*(Università degli studi di Salerno – DICIV)*

## Canova Association

Ken Marquardt

*(President of Canova Association)*

Dott. Maurizio Cesprini

Arch. Paola Gardin

Arch. Paolo Volorio

*Professor, Polytechnic of Milan ("Constructive character of historic buildings" and "Fundamentals of design for historical building")*

*With the welcome participation and support of:*

**Ing. Arch. Maurizio Di Stefano**

*President of ICOMOS Italy*

## Registration form

To be delivered or shipped WITHIN 27 June 2015 to the secretariat of the course (via mail) 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 nature.

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 \_\_\_\_\_

SECOND NAME \_\_\_\_\_

DATE AND PLACE OF BIRTH: \_\_\_\_\_

EDUCATION: \_\_\_\_\_

C.F. / IVA: \_\_\_\_\_

TITLE: \_\_\_\_\_

SOCIETY: \_\_\_\_\_

ADDRESS \_\_\_\_\_

CAP \_\_\_\_\_

TOWN \_\_\_\_\_

Tel. \_\_\_\_\_

MOBILE PHONE : \_\_\_\_\_

E – mail \_\_\_\_\_

Data \_\_\_\_\_

SIGNATURE \_\_\_\_\_

### **Organized by:**

Politecnico di Milano  
Department A.B.C. Architecture Build Environment,  
Construction Engineering

### **School directors:**

Cristiana Achille, Francesco Fassi, Ken Marquardt

### **Important Dates:**

27.07.2015 - 05.08.2015

Registration before 27 June 2015

### **Where:**

Ghesc - Montecrestese - Domodossola

### **Registration fee: € 900.**

**The fee includes accommodation and food at Villa Raghezzi (Preglia di Crevoladossola)**

- **250€** to be paid to Politecnico di Milano  
IBAN IT98L0569601620000001840X18  
BIC/SWIFT: POSOIT22  
Addressed to: Politecnico di Milano Dept.  
A.B.C., by Banca Popolare di Sondrio,  
Agenzia 21 Via Bonardi, 4  
Reason for payment: *Summer school Ghesc 2013*
- **650€** to be paid to the Canova Association at the summer-school opening day

### **For further information please contact:**

cristiana.achille@polimi.it  
francesco.fassi@polimi.it  
associazione@canovacanova.com

### **... or see the web sites.**

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

## **Laboratory of Place 2015 Ghesc and surroundings History, survey, evolution Summer School: Surveying Cultural Heritage**

### **4th Edition**



### **Promoters**

POLITECNICO DI MILANO



ASSOCIAZIONE CANOVA

### **With the support of**



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