

SUPSI

# Mortar technology and construction history at Müstair Monastery

The UNESCO World Heritage site of the Convent St John at Müstair is amongst the best preserved monastic sites in Europe and since 1969 has been systematically investigated archaeologically.

The project will study about 5,000 samples of mortar from all phases in order to correlate the types of mortars with period and function, as well as specific preparation and application methods. Indeed, this case study is exceptionally well suited for a research concerning the development of building technology for over a thousand years.

Mortar production in particular have only recently been identified as key element to understand and scientifically date materials, methods, movements and motivations of builders and patrons, especially for periods and sites with little or no written evidence to draw on. Building materials reflect natural resources as well as cultural choices. Methods of preparation and construction vary with period and purpose, but can tell also of skills and working conditions. With the movement of men, animals and materials also technologies and ideas get transported and create connections between sites far apart. Motivations can be read implicitly from material, but need to be connected to the historic context by absolute dates.



## The project aims to achieve the following objectives:

- ◆ Identify mortar compositions and their degree of standardization as well as purpose driven.
- ◆ Diversification of recipes to understand the development of mortar production methods and their effect on the performance of mortars in relation to construction types.
- ◆ Identify local and imported construction materials and understand how local availability of natural resources influenced the choice of materials and technologies employed at the building site.
- ◆ Identify possible economical and functional reasons as opposed to cultural-historic and ideological motives regarding materials applied as well as production and construction techniques used.
- ◆ Determine the wider European cultural and historical context of the observed variations in materials used and methods employed. Identify regional and supra-regional networks of material transport and knowledge exchange between the early medieval and early modern period (8th to 18th century).

## Project leader

Albert Jornet

## Research team

Marta Caroselli  
Giovanni Cavallo  
Christine Bläuer  
Jürg Goll  
Sophie Hueglin  
rka Hajdas ETHZ (mortar dating)

## Financed by

FNS – Swiss National Science Foundation

## Project partners

Foundation Pro Monastery St.-Johann, Patrick Cassitti

## Duration

01.03.2017 - 01.03.2020

## Link

<http://p3.snf.ch/project-169411>

