



ATHENS Course

Architectural Heritage: from 3-D geometric survey to structural analysis

Politecnico di Milano, March 13-17, 2023



Detailed programme:

March 13 (Monday)

9.15-11.15 – A. Taliercio: Introduction to historical masonry structures, evolution of the construction techniques, main structural elements (walls, arches, vaults), material properties

11.15-12.15 and 14.15-15.15 – G. Milani: different analysis methods used in practice to analyze historical buildings

15.15-17.15 – G. Cardani: structural health monitoring of historical buildings, presentation of the case study and the output to be delivered (FE analysis of a chapel); definition of the working groups (4-5 students each)

March 14 (Tuesday)

8.15-18.15 (incl. 2 hours lunch break) – D. Aita, G. Cardani, G. Milani: trip to Sacro Monte di Varese

March 15 (Wednesday)

9.15-10.45 – D. Aita: historical evolution of the analysis and design of masonry arches

10.45-12.15 – D. Coronelli: limit analysis applied to masonry arches and vaults

14.15-17.15 – (to be defined): presentation of the FE program Abaqus

March 16 (Thursday)

9.15-12.15 – (to be defined): assistance to students in the implementation of their FE models

14.15-17.15 – (to be defined): supervision of students in the numerical analysis of their building

March 17 (Friday)

9.15-12.15 – (to be defined): supervision of students in the draft of their report

14.15-17.15 – all the teaching staff: presentation of the students' reports (15-20 min for each group)