



UNIVERSITÀ
DEGLI STUDI
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Dipartimento di
Ingegneria Civile
e Ambientale

INDICEE

**International Doctorate in
Civil and Environmental Engineering**



SEMINAR

INTELLIGENCE AND STRUCTURAL MODELS. PARADIGMS AND CHALLENGES FOR THE ANALYSIS OF MASONRY STRUCTURES

Michela Monaco

Professor at DING – Department of
Engineering, University of Sannio



MONDAY

3 MARCH 2025



TIME

3:00-6:00 pm



LOCATION

Room 031 S.Marta



Please register by email
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Masonry structures are prone to extensive damage followed by failure and collapse, like recent earthquakes have clearly demonstrated. Although very few masonry buildings have been built in modern times, nevertheless knowledge of the related design methods should be part of a civil engineer's training. The development of effective and affordable strategies for the analysis and strengthening of masonry is urgently needed, since many older masonry structures currently in use were in fact designed and constructed with little or no consideration of these factors. Despite a growing need for rehabilitation and conservation of these structures, understanding of their behavior has been declining in the first decades of last century, while in recent times the development of numerical tools has improved knowledge about assessment methods for masonry buildings. The developed tool, however powerful, cannot ignore the knowledge of the object of analysis to be effective. In particular, monumental buildings are complex systems of arches, vaults, cloisters, lintels, spiral stairs whose behaviour should be known and understood before the analysis, and only intelligence can be the discriminant. Starting with a brief discussion on the behaviour of masonry structures, in this seminar some paradigms and challenges for their analysis are presented and discussed.



Michela Monaco

Graduated with honors in Civil Engineering at University of Pisa. Winner of a C.N.R. scholarship on Intervention methodologies for Cultural Heritage. Ph.D in Structural

Engineering and postdoctorate scholarship at University of Naples Federico II. Associate professor in Structural Mechanics at DING - Department of Engineering, University of Sannio. Member of the Teaching Board of the Doctorate Course in "Information Technology for Engineering" at University of Sannio. Past member of the Teaching Board of the Doctorate Courses in "Seismic strengthening and retrofit of structures" and "Representation, safety of structures and environment" at Second University of Naples. Research interests in Solid Mechanics, Assessment and safeguard of Cultural Heritage, Experimental Mechanics.

The Seminar is free and open, but please register sending an email to Prof. Michele Betti - michele.betti@unifi.it.

For PhD students will be released a certification of attendance with a recognition of 0.5 ETCS.