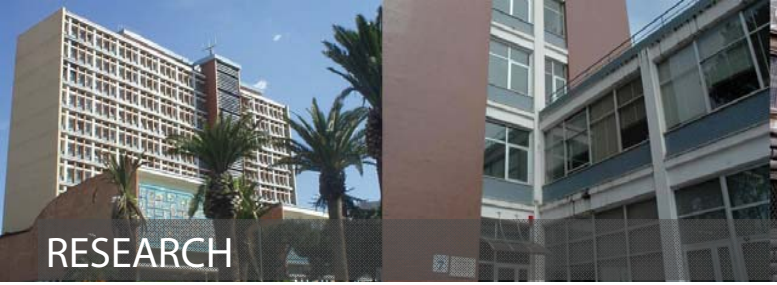

RESEARCH

The Department of Structures for Engineering and Architecture (DiSt), as documented by scientific publications and several funded research projects with national and international research institutes and leading European R&D companies, carries out numerous theoretical and experimental research activities. In particular on: mechanics of materials and structures, structural engineering, structural dynamics, seismic risk, vulnerability and reliability, fire safety of structures, probabilistic approaches in structural analysis, analysis of traditional structures and materials, study of composite materials and innovative structural systems for applications in architecture and civil, industrial, biomechanical and materials engineering.

LABORATORIES

DiSt laboratories are nowadays recognized as official laboratories by the Central Technical Service of the Superior Council of Public Works.
They have a great variety of technical machines, characterized by properly designed systems and advanced experimental equipment for performing: large-scale static and dynamic tests; bi-directional pseudo-dynamic tests; unconventional tests for the standardization of mechanical tests and characterization of innovative structural systems; tests on new technologies for seismic protection and isolation; tests on composites for the safety of transport infrastructures exposed to external actions; tests on nano-composites for aeronautical and industrial applications.
DiSt has agreements with other public and private external laboratories, which extend the types of possible experimental activities, as for example for fire tests.

LIBRARY

The DiSt library houses a historical-bibliographic heritage derived from the Institutes of Science of Constructions, Technique of Constructions, Bridges and from the Institute of Constructions of the Faculty of Architecture.
The scientific updating of the library takes place in a specific way to obtain a continuous and current information on international literature concerning all the constructions and their structural, architectural and material aspects.
Besides thousands of monographs, there are more than 200 periodicals in the library, of which at least 40 are active.
In addition, since 2003, the DiSt library maintains, manages and updates the catalogue of bibliographic and audio-visual heritage of **A.C.I. Italy Chapter**.

CONSORTIA

The DiSt hosts:

- **Consortium ReLUIS** (the Laboratories University Network of Seismic Engineering)
- **CNR-ITC** (Technology and Constructions Institute)

The DiSt also carries out research, development, technology transfer and high educational activities in collaboration with:

- **Consortium AMRA** (Analysis and Monitoring of Environment Risk)
- **STRESS Scarl** (Development of Research and Technologies for sustainable and seismically safe building)

CONTACTS

HEAD and ADMINISTRATIVE OFFICE
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SCHOOL OF POLYTECHNIC AND BASIC SCIENCES

university of naples federico II

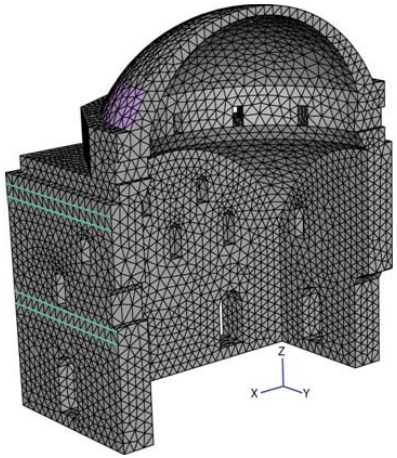
DiSt

DEPARTMENT OF STRUCTURES FOR ENGINEERING AND ARCHITECTURE

The Department of Structures for Engineering and Architecture (DiSt), born in 2013, gathers the didactic and scientific heritage of the Department of Structural Engineering, activated in the faculty of Engineering by merging the Department of Structural Analysis and Design, the Department of Structural Mechanics and the Department of Constructions and Mathematical Methods in Architecture.
The scientific tradition carried on by the department, directly derives from the activity of the Application School for Bridge and Road Engineers, which was created in Naples in March of 1811 by Gioacchino Murat on the model of the French *Ecole Polythecnique*, and represented the first core of the modern Faculty of Engineering.
The DiSt restores, after half a century, the unity of the Neapolitan School, combining advanced theoretical and experimental research and great cultural and educational tradition.
Therefore, all the didactic and research activities related to the structural mechanics and structural design, since point of reference for the scientific, professional and business community, have been collected in a single structure.

DIDACTIC OFFER

In the DiSt takes place the Master Degree programme in **Structural and Geotechnical Engineering (STReGA)**, which provides specific professional skills in the disciplinary field of Civil Engineering, with particular reference to the Structural and Geotechnical field, integrating the knowledge and the skills already acquired through the Bachelor Degree programme in Civil Engineering. The STReGA programme also offers many courses in **English language**.
In 2013, the DiSt launched the **inter-university Master Degree** Programme in Civil Engineering with the University of Sannio.



COURSES

DiSt teachers are involved in the following Bachelor and Master Degree programmes:

BACHELOR DEGREE

Biomedical Engineering
Civil Engineering
Construction Engineering
Projects and Infrastructures Management Engineering
Mechanical Engineering
Naval Engineering
Land and Environment Engineering
Materials Science and Engineering
Science of Architecture

MASTER DEGREE

Biomedical Engineering
Chemical Engineering
Hydraulic and Transportation Systems Engineering
Constructions Engineering
Electrical Engineering
Management Engineering
Materials Engineering
Naval Engineering
Structural and Geotechnical Engineering

PhD AND MASTER PROGRAMMES

PhD PROGRAMME

The main objective of the proposed PhD in **Structural and Geotechnical Engineering and Seismic Risk (DISGES)**, is the development of highly qualified researchers by offering a training program aiming at increasing the students capacity for analysis, synthesis, decision-making and organizational independence which can facilitate their inclusion both in the research activity and /or in other fields of the job market.
By virtue of the interdisciplinary and complementary features of the research groups involved in the PhD program the DISGES aims at providing the PhD students with a firm preparation in physics and mathematics and with an advanced understanding of the scientific aspects that contribute to the evaluation, mitigation and monitoring of natural and human risks, with particular emphasis on the seismic one.
The basic training will be developed during the first year while the specialistic one will be completed in the subsequent two years by means of theoretical or experimental research activity that will make use of renowned and innovative laboratories in the fields of structural and geotechnical engineering as well as seismology. Starting from the second year the PhD students are supposed to spend at least six months of study in training and research at prestigious international institutions in order to deepen their knowledge.
Finally, the DISGES aims at encouraging the participation of doctoral students in national and international research projects.

MASTER PROGRAMMES

Sustainable Constructions under natural hazards and catastrophic events – 1st Level: The Master SUSCOS, funded by European Community, is organized within the program Erasmus Mundus Action 1, and it involves 6 Universities: University of Naples Federico II, Czech Technical University of Praga (Coordinator), University of Coimbra-Portugal, Lulea University of Technology-Sweden, University of Temisoara-Romania, University of Liege-Belgium. The Master is focused on the sustainable design of structures against natural disasters and exceptional actions.
BIM and Integrated Sustainable Design – 2nd Level: The Master aims to train professionals with high design skills in the BIM environment, able to handle issues of interoperability information models and complex design. Professional figures, through an integrated approach to special designs, from the architectural design to the structural and plant design, and thanks to a strong expertise in BIM tools, will be able to orient the design choices by meeting the criteria of sustainability and resource optimization.
Emerging Technologies for Construction – 2nd Level: The master aims to the formation of experts in the field of new technologies for constructions. It is strongly geared towards the entry into the workplace and involves different companies and realities operating in the sector of constructions, with the active participation of high-level professionals with a great experience.
Forensic Engineering – 2nd Level: The Master is addressed to freelancers, civil servants, business employees and managers. It aims to train highly qualified professionals in the exercise of the profession of Forensic Engineer for the Judicial Authority or for public or private entities.