PAOLO NEGRO

EDUCATION

Doctor of Philosophy in Civil Engineering, University of Wales at Swansea, United Kingdom.
Master of Science in Earthquake Engineering, University of California at Berkeley, United States.
Master of Science in Civil Engineering, University of Padua, Italy.

PROFESSIONAL EXPERIENCE

Official of the European Commission, grade AD13 (Scientific Advisor). Research officer/project leader at the Joint Research Centre of the European Commission, in the Unit Safety and Security of Buildings, European Laboratory for Structural Assessment (ELSA). Long experience and record of research activity in earthquake engineering and environmental design of buildings, leading many research projects at the European Laboratory for Structural Assessment, mostly involving large scale seismic testing of structures. Serving as liaison member in the Technical Committee ISO TC71, Concrete, Reinforced Concrete and Prestressed Concrete, chairing two subcommittee in charge of drafting new standards, and in the Technical Committee TC13, Seismic Design, of the European Convention for Constructional Steelwork. Representing the Joint Research Centre in the COST Action C25, Sustainability of Constructions, and is currently leading the JRC Action SAFESUST, Impact of sustainability and energy efficiency requirements on building design and retrofit and a preparatory action in support of the New European Bauhaus initiative. From 01-03-1991 to 31-07-2024.

Manager of the provincial office of 4EMME Service Spa in Bolzano, Italy. Execution of load tests on civil and industrial structures and foundation systems. Contribution to the development of a testing/measurement methodology based solely on the use of clinometric sensors (without direct displacement measurements) for bridges or roofs. From 01-08-1990 to 28-02-1991.

Design engineer, technical office manager at the general construction company and prefabricated manufacturer Agribeton Spa in Treviso, Italy. Executive design of numerous civil and industrial buildings, with the development of innovative solutions and production assistance. Development of a pre-stressed thin-wall shed beam for spans up to 26 meters, using strip modeling and experimental verifications through load testing. From 01-07-1988 to 31-07-1990.

Design engineer at the Polytechna Harris engineering company in Milan. Collaboration on numerous projects. Preliminary design for the construction of an oil terminal in Conakry, Guinea: development of a calculation methodology for defining mooring forces resulting from wind and current actions on hulls, with the implementation of a specific finite element for mooring line-dolphin in the ANSR calculation code, and verification with the results of basin tests. Detailed design of marine works for the Montalto di Castro nuclear power plant: development of a calculation code for optimizing the metacentric distance for flotation-sinking of the prefabricated intake structure; optimization with finite element calculations of the steel gates to be positioned on the prefabricated segments of the cooling water intake pipeline during flotation, conception, and assistance with load tests on-site. Participation in the execution project for the marine works at the Brindisi thermoelectric power plant. From 01-09-1987 to 30-06-1998.

In collaboration with the engineering firm Ingegneri Associati of Treviso, Italy: Implementation of slope reinforcement techniques using geotextiles for the consolidation of an 18-meter high

masonry retaining wall in a historical complex (the San Francesco convent in Conegliano, Treviso), with the definition of laboratory tests to measure the friction between the geotextile and the soil; development of a finite element model for the modeling of a medieval masonry bridge with seven oblique spans, in the historic centre of Treviso; early implementation of the recovery technique for wooden floors in historic buildings (at the "Turrini-Piazza") using flexible connectors. Participation in the preliminary project for the construction of marine works at the Brindisi Sud thermoelectric power plant, with prefabricated structural solutions, the construction of segments in a dry dock, flotation, and programmed sinking of the same. From 01-03-1985 to 31-08-1987.

Freelance engineer, in collaboration with the professor of the Seismic Engineering course at the University of Padua. Collaboration on the execution project for the reconstruction of the Gemona Cathedral and the preliminary project for the reconstruction of the Venzone Cathedral, both destroyed by the Friuli earthquake in 1976. Collaboration in the development of reinforcement techniques for off-axis marble columns (drilling of the columns, insertion of steel tubes, connection to new foundations on micropiles), with the necessary numerical modeling. Development of a global finite element model for verifying the dynamic response. Development of a finite element model for the modeling of the Arch of Gallieno in Rome.