

Prof. Eng. EMIDIO NIGRO - SHORT CURRICULUM VITAE

Prof. Eng. EMIDIO NIGRO, Full Professor of Structural Engineering at the Department of Structures for Engineering and Architecture of the University of Naples Federico II, Italy.

PhD in Structural Engineering in 1994 at University of Naples Federico II, Italy.

TEACHING ACTIVITY

- At the present teacher of two courses at the Department of Structural Engineering of the University of Naples Federico II: 1) "Special Structures and Design of Fire Resistant Structures" (9 ECTS, from 2010/11) for Master Degree in Structural and Geotechnical Engineering; 2) "Structural Engineering" (9 ECTS, from 2022/23) for BSc in Civil Engineering.
- In the past, teacher of: "Special Structures" (12 ECTS, from 2002 to 2010), "Management and Maintenance of Structures" (6 ECTS from 2006/07); "Strengthening of existing buildings" (12 ECTS, from 2003 to 2005); "Composite Structures" (3 ECTS) at University of Naples Federico II.

SCIENTIFIC RESEARCH TOPICS

He is author of three books and about 400 scientific papers, published in international and national scientific journals, conference proceedings and scientific volumes. The more recent main research activities deal with:

- Fire behaviour and analysis of steel and steel-concrete composite members and structures.
- Fire behaviour of steel structures protected with intumescent coatings.
- Safety check of existing bridges.
- Seismic behaviour, vulnerability and strengthening of masonry and reinforced concrete structures.
- Fire behaviour of reinforced concrete tunnels.
- Non-linear analysis and design aspects of steel and steel-concrete composite members and framed structures.
- High temperature behaviour of concrete structures reinforced or strengthened with FRP materials.

SELECTED RECENT RESEARCH PROGRAMS AND APPLIED RESEARCH ACTIVITIES

Several National and International Research Programs, including:

- STAR PLUS 2020 - LINEA 1. Research Project "PROSYSSIF - Chemo-physical properties of PROtective SYstems for Steel Structures in Fire" (Project N. 21-UNINA-EPIG-136).
- Addendum N°6 KE3779/HSE (2017-2020) to Framework Collaboration Agreement KN3012/GEN between CERN and UNINA-DIST: Structural and geotechnical aspects of the civil structures and infrastructures of the HL-LHC (High Luminosity - Large Hadron Collider) project of CERN. Scientific Coordinator for UNINA-DIST.
- Addendum N°13 KE4936/HSE (2020-2022) to Framework Collaboration Agreement KN3012/GEN between CERN and UNINA-CESMA: Fire-Induced Radiological Integrated Assessment project (F.I.R.I.A.) project of CERN. Scientific Coordinator for UNINA-CESMA.
- RELUIS-DPC Research Program 2019-2021 and 2022-2024: Research Task in WP5 (Quickly performing, low-impact and integrated interventions) and in WP11 (Code contributions relating to Existing Buildings in Reinforced Concrete).
- RELUIS-DPC Research Programs 2005-2008, 2010-2013, 2014-2017, 2018: Research Task n. 2 (Reinforced Concrete Structures) and Research Task n. 5 (Innovative materials). Scientific coordinator of Research Unit.
- COST Action C26 (Urban habitat constructions under catastrophic events, 2007-2009).
- COST Action TU0904 "IFER" (Integrated Fire Engineering and Response, 2010-2014).
- COST Action TU1207 (Next Generation Design Guidelines for Composites in Construction, 2013-2017).
- Four different applied research activities (2016-present) for RFI (Rete Ferroviaria Italiana): Analysis and technical-scientific study for the fire resistance check of the lining of railway tunnels.
- Applied research activity (2015-2018) for National Fire Brigade Corps (Napoli): Technical-scientific study regarding the fire resistance of the steel structures of the buildings of the Central Fire Brigade Command of Naples.
- Applied research activity (2011-2014) for Ministry of Justice: Research activity aimed at applying the Fire Safety Engineering approach to the buildings of new Courthouse of Naples.
- Applied research activity (2009-2010) for Civil Protection Department (DPC): Technical-scientific study for fire safety check (with FSE) of the structures of car parks for residential buildings .

SUPERVISION OF GRADUATE AND UNDERGRADUATE STUDENTS

- At the present supervisor of 3 PhD students and 2 research fellows.
- In the past, supervisor of 12 PhD students and several research fellows.
- Supervisor of more than 100 MSc students at University of Naples (from 2002) and University of Salerno (1989-2002).

PARTICIPATION AND ORGANIZATION OF SCIENTIFIC CONFERENCES

- Participation in more than 100 national and international conferences or workshops.
- Chairman of the IFireSS 2017 Conference (2nd International Fire Safety Symposium, Napoli, 7th-9th June 2017).
- Member of Organizing Committees and Scientific Committees of several national and international Conferences.

TECHNICAL AND CODE COMMITTEES

- Member of Commission UNI/CT 021 "Structural Engineering", which is the national mirror group to CEN/TC 250 activities.
- Chairman (from 2017) and member of the Italian Working Group UNI/CT 021/GL01 on "Structural Design in case of fire".
- Member of the Working Group 2 of EN1993-1-2 and EN1994-1-2 (Part 1-2: Structural Rules - Structural Fire Design) of CEN/TC 250/SC3 and SC4.