

PERSONAL INFORMATION



Prof. Eng. Antonio Formisano

📍 Dep. of Structures for Engineering and Architecture – University of Naples
"Federico II" Piazzale Tecchio, 80 – 80125 Naples (Italy)



✉ antoform@unina.it; pec: antonio.formisano@personalepec.unina.it



JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR

WORK EXPERIENCE

1/11/07– today

University and higher education institutions teacher

University of Naples Federico II, Naples (Italy)

Assistant Professor in the disciplinary scientific sector "Structural Design" (08/B3) from 01/11/07.

Confirmation as Assistant Professor in the same disciplinary scientific sector from 01/11/10.

Aggregate Professor of "Theory and Design of Steel Constructions" at the Faculty of Engineering of the University of Naples Federico II from the academic year 2011/2012

Aggregate Professor of "Laboratory of Structural and Architectural Design" at the Faculty of Architecture of the University of Naples Federico II from the academic year 2011/2012

Aggregate Professor of "Structural Design" at the degree course in Building Engineering of the Polytechnic School and Basic Sciences of the University of Naples Federico II from the academic year 2014/2015

Adjunct Professor of "Structural Design" at the degree course in Architecture - Building Engineering of the Polytechnic School and Basic Sciences of the University of Naples Federico II from the academic year 2016/2017

Licensed to the role of Associate Professor in the competition sector 08/B3 "Structural Design" from April 2017

Associate Professor of Structural Design at the Department of Structures for Engineering and Architecture of the University of Naples Federico II since March 2021.

Licensed to the role of Full Professor in the competition sector 08/B3 "Structural Design" from June 2021

EDUCATION AND TRAINING

23/07/03

MSc in Building Engineering

University of Naples Federico II, Naples (Italy)

MSc Thesis in Theory and Design of Steel Constructions "Theoretical-experimental analysis of the low-cycle fatigue of cold-formed steel beams" (votation:110/110 cum laude)

17/01/07

PhD in Construction Engineering XIX Cycle

University of Naples Federico II, Naples (Italy)

PhD Thesis:

Seismic upgrading of existing RC buildings by means of metal shear panels: design models and full-scale tests

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	C1
English language course held at the "New Europe" institute placed at Via Pessina in Naples in the period October 2005 – April 2006					

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages

Communication skills Very good communication skills obtained through my experience as Professor and Researcher

- Organisational / managerial skills
- Leader of many national and international research projects
 - Coordinator of the research group of the Dept. of Structures for Engineering and Architecture on historical centres and masonry aggregates
 - First and corresponding author of several papers published into high impact journals

EDUCATIONAL AND PROFESSIONAL EXPERIENCES

2018 – Present: Course of Structural Design within the II level Master ARINT “Architecture and design for internal areas” at the Faculty of Architecture, University of Naples “Federico II”, ITA.

2017 – Present: Reviewer and Jury Committee Member of PhD theses developed in Italian and International Universities.

2016 – Present: Erasmus Committee Member of the Department of Structures for Engineering and Architecture, University of Naples “Federico II”, ITA.

2016 – Present: Course of Structural Design in the Degree Course of Building Engineering and Architecture at the Faculty of Engineering, University of Naples “Federico II”, ITA.

2015-Present: Course of Rehabilitation and Maintenance of Structures (English language) within the II level International Master on “Sustainable Constructions under natural hazard and catastrophic events” (SUSCOS)

2014 –2016: Course of Structural Design within the Degree Course of Building Engineering at the Faculty of Engineering, University of Naples “Federico II”, ITA.

2013-Present: Course of Theory and Design of Steel Constructions (English language) within the II level International Master on “Emerging Technologies for Construction” (ETeC)

2011-Present: Tutor within the PhD course in Management System FCT (Fundacao para a Ciencia e Tecnologia) at the Portugal Universities of Aveiro, Braga, Lisbon, Porto and Minho.

2012 - Present: Co-tutor of MsC theses at the Degree Courses of Architectural Design and Architecture (unique cycle) at the Faculty of Architecture, University of Naples “Federico II”, ITA.

2011-2015: Course of Steel in Refurbishment and Aluminium Structures (English language) within the II level Master on "Design of Steel Structures" at the Faculty of Engineering, University of Naples “Federico II”, ITA.

2011 – 2014: Course of Theory and Design of Steel Constructions (English course) within the MsC course on Structural and Geotechnical Engineering at the Faculty of Engineering, University of Naples “Federico II”, ITA.

2011-2012: Professor of the Laboratory of Structural Design and Design course at the Faculty of Architecture, University of Naples “Federico II”, ITA.

2010 - Present: Tutor of BsC and MsC theses at the Degree Courses of Civil Engineering, Environmental Engineering, Building Engineering, Building Engineering-Architecture and Structural and Geotechnical Engineering of the Faculty of Engineering, University of Naples “Federico II”, ITA.

2010-Present: Tutor of training activities in the field of Structural and Seismic Engineering for students of the degree courses in Building Engineering, Architecture-Building Engineering and Structural and Geotechnical Engineering at the University of Naples “Federico II”, ITA

2009 - Present: Co-tutor of students within the PhD Course in Construction Engineering (now Structural Engineering, Geotechnics and Seismic Risk) of the Engineering Faculty (now School of Polytechnic and Basic Sciences), University of Naples “Federico II”, ITA.

2003 – 2011: Assistant to the Course of Structural Design (Prof. Federico M. Mazzolani) at the MsC on Civil Engineering at the Faculty of Engineering, University of Naples “Federico II”, ITA.

2003-2009: Co-Tutor of MsC theses at the Degree Course of Civil Engineering, University of Naples “Federico II”, ITA.

2011–Present: Consultant of Structural Engineering projects for the design of new reinforced concrete, steel and timber structures and the seismic assessment and retrofitting of historical and monumental masonry constructions.

2000–2010: Independent co-worker at Mazzolani & Partners - Engineering Office in Naples, ITA.

Normative activities

2005-2006: Advisor for the Unification Italian National Entity (UNI) aimed at translating to Italian the European code EN-1993-1-8 for the design of steel joints;

2008-2011: Member of the study committee for the preparation of the new version of the Italian Building Code, section: CNR-DT 208/2011 on the design of aluminium structures (Research National Council – CNR);

2011-2012: Member of the study committee for the review of the Italian Building Code (2008), section: Steel and composite steel-r.c. structures;

2015 - Present: Member of the Italian Technical Committee for the UNI U7309 “Aluminium Structures”;

2015 - Present: Member of the Project Team for the development of a new version of the Eurocode 9 - Aluminium Structures (EC9). Task PT2 “New Types of Connection”

2017-Present: Member of the Project Team for the development of a new version of the Eurocode 9 - Aluminium Structures (EC9). Task PT3 “Long span structures”

Research activities

His scientific activity is testified from more than 500 scientific papers published on national and international journals and national and international conferences, where he has participated as speaker.

The developed activity deals with the following theoretical-numerical studies and experimental researches:

1) Theoretical-numerical activities

- 1.1) Consolidation of existing structures by means of metal-based techniques;
- 1.2) Seismic protection of existing RC structures by means of either fibre-reinforced composite materials or base isolation systems;
- 1.3) Behaviour of metal shear panels for application into seismic resisting structures;
- 1.4) Seismic analysis of cold-formed thin-walled steel (mild and high strength) members;
- 1.5) Innovative techniques and processes for producing aluminium-polycarbonate lightweight roof systems;
- 1.6) Aluminium alloy T-stub joints;
- 1.7) Joints among steel sheeting with particular reference to the block tearing collapse mechanism;
- 1.8) Metallic connection systems for timber-steel-concrete composite floors;
- 1.9) q-factor of I steel sections;
- 1.10) Analysis methodologies and seismic vulnerability of r.c. and masonry buildings;
- 1.11) Robustness of steel structures;
- 1.12) Vulnerability of r.c. buildings in the Vesuvius area;
- 1.13) Non-linear analysis of masonry building aggregates in seismic areas;
- 1.14) Volcanic analysis of existing ordinary and monumental buildings;
- 1.15) Fire resistance of masonry;
- 1.16) Sustainability and Life Cycle Assessment of building products and structures;
- 1.17) Non-destructive tests for mechanical characterization of carpentry and rebar steels.

2) Experimental and in-situ activities

- 2.1) Tests on RC full-scale structures seismically retrofitted by means of base isolation systems;
- 2.2) Tests on RC members reinforced with fibre-reinforced composite materials;
- 2.3) Tests on both full-scale RC structures and steel frames seismically retrofitted with metal shear panels;
- 2.4) Tests on the rotational capacity and fatigue resistance of cold-formed steel beams;
- 2.5) Testing on the base components (bar and node) of innovative aluminium alloy reticular space structures;
- 2.6) Experimentation on connections among steel sheeting by means of either bolted or welded or with epoxy resins or mixed joints.

- 2.7) Experimental tests on 3D steel lattice welded beams under monotonic failure loadings.
- 2.8) Laboratory tests on bricks and mortars manufactured with agricultural or alimentary wastes under form of hemp, jute and coconut fibres.
- 2.9) Non-destructive and destructive tests for mechanical characterization of carpentry and rebar steels.
- 2.10) Laboratory physical and mechanical tests on lime and cement mortar bricks manufactured with waste of fennels.
- 2.11) In-situ checks of buildings damaged after L'Aquila earthquake (Italy, 2009), Emilia-Romagna earthquake (Italy, 2012), Central Italy earthquake (Italy, 2016) and Ischia earthquake (Italy, 2017).
- 2.12) Coordinator of the University of Naples' team for the reconstruction plan of Arsitia, a small town in the district of Teramo damaged from the L'Aquila earthquake.

Research experiences and grants

Participation to the following National and International research projects:

2001-03: PRIN 2001 - Research project of considerable national interest - Research theme: 'Innovative steel structures for seismic protection of buildings'. Funding scheme: Italian Ministry of Education, University and Research. Coordinator: F. M. Mazzolani

Role: Member

2002: CNR 02.521.ST97 'Development of behavioral models of innovative devices for structural safeguard and related implementation'. Funding scheme: Italian Research National Council. (CNR) Coordinator: F. M. Mazzolani.

Role: Member

2002-04: COST Action - C12 'Improving buildings' structural quality by new technologies'. Funding scheme: EU funding. Coordinator: Jean-Pierre Jaspart. WG2 "Structural Integrity under Exceptional Actions" (leader: F. M. Mazzolani).

Role: Member

2002-05: CNR - MIUR 'Diagnosis and safeguard of architectural hand - made with particular reference to the effects deriving from seismic events and other natural calamities' - Theme n.2: Methods and models for the prediction of the structural behaviour of damaged or not damaged constructions - Line n. 2.5: Modelling of innovative devices for structural safeguard. Funding scheme: Italian Research National Council and Ministry of Education, University and Research. Coordinator: F. M. Mazzolani

Role: Member

2003-05: PRIN 2003 - Research project of considerable national interest - Research theme: 'Innovative metallic structures for seismic protection of new and existing buildings: design criteria and methodologies'. Funding scheme: Italian Ministry of Education, University and Research. Coordinator: F. M. Mazzolani

Role: Member

2004 – 2007: PROHITECH - 'Earthquake protection of historical buildings by reversible mixed technologies'. Funding scheme: FP6 - INCO within the EU 2002-06 Agenda. Coordinator: F. M. Mazzolani

Role: Member

2005-07: PRIN 2005 - Research project of considerable national interest - Research theme: 'Structural protection and rehabilitation of historical buildings by reversible mixed technologies'. Funding scheme: Italian Ministry of Education, University and Research. Coordinator: F. M. Mazzolani

Role: Member

2005-07: PRIN 2005 - Research project of considerable national interest - Research theme: 'Innovative techniques and strategies for seismic retrofitting of existing RC structures'. Funding scheme: Italian Ministry of Education, University and Research. Coordinator: Ciro Faella

Role: Member

2005-08: RELUIS 'Network of University Laboratories of Seismic Engineering' - Line n.5 'Development of innovative approaches for the design of steel and steel - concrete composite structures'. Funding scheme: Italian Civil Protection Department. Coordinator: F. M. Mazzolani

Role: Member

2006-10: COST Action - C26 'Urban Habitat Constructions under Catastrophic Events'. Funding scheme: The EU funding. Chair: F.M. Mazzolani & E. Mistakidis. WG4 "Risk Assessment for Catastrophic Scenarios in Urban Areas" (leaders: M. Faber & M. Indirli).

Role: Member

Curriculum Vitae Prof. Eng. Antonio Formisano

2010 – 13: RELUIS II 'Network of University Laboratories of Seismic Engineering'. Funding scheme: The Italian Civil Protection Department.

a) Thematic area: “Tools for evaluation and management of the built heritage risk” - Subtask1a “Analysis and check of masonry constructions” Coordinators: S. Lagomarsino, G. Magenes, C. Modena. Coordinator of the research line on “Seismic non-linear analysis of masonry building aggregates in historical centres”.

Role: Leader of the research unit – Unina-c Nonlinear analysis for multi-unit masonry buildings

b) Thematic area: “Seismic design of new constructions”. Research line: - Task 2 “Steel and composite steel-concrete structures” - Coordinators: R. Landolfo and R. Zandonini.

Role: Member of the research unit - UNINA “Steel bracing systems”.

c) Thematic area: “Tools for evaluation and management of the built heritage risk” - Task 1.1.3. “Strategies for reduction of mid-term risk on regional scale” - Coordinator: G. Zuccaro.

Role: Coordinator of the research line on “Simplified evaluation of seismic vulnerability of masonry aggregate buildings”.

2011-13: FARO (Funding for beginning of original researches) - Study of the internal dynamic of the volcanic system Somma-Vesuvius through geochemical evolution and keep on time of magma of past eruptions for both forecasting future eruptions and mitigating risk” - Coordinator: A. Lima. Funding scheme: The Italian funding programme on financing for beginning original in research.

Role: Coordinator of the research line on “Vulnerability of Vesuvius building roofs subjected to tephra loadings”.

2011-13: POST-EARTHQUAKE INTERVENTION - Reconstruction plan of the municipality of Arsita (Teramo)- Coordinator: ENEA research centre of Bologna. Universities involved: Chieti/Pescara, Naples “Federico II” and Ferrara. Funding scheme: Private convention between the municipality of Arsita and the Universities involved.

Role: Coordinator of the University of Naples research unit.

2014-16: TRAVI BB.CC. “Development and industrialization of innovative systems of welded composition steel beams for light floors and roofs with applications into monumental buildings and archaeological sites” –Partnership: Cooperation between the DiSt Department at the University of Naples Federico II and the Italian metallurgic company Sideredil s.a.s. Funding scheme: P.O.R . Campania FESR 2007-13, Regione Campania Agenda, EU funding.

Role: Leader

2014-2017: PROVACI – Technologies for Seismic Protection and Valorization of Cultural Interest Complexes – Coordinator: Stress S.c. a r.l., Partners: University of Naples “Federico II”, University of Padova, T.R.E Consortium, CETMA Consortium, Si.pre S.r.L., C.R.A.C.A. Soc.Coop, Nanofab S.c. a r.l. Funding scheme: P.O.N . 01_02324 - MIUR 2014-20 Agenda, EU co-funding [FESR, FSE and MIUR]. Coordinator: GAETANO MANFREDI

Role: Member of the research line “Cultural Heritage”.

2014-17: SNOWBALL - Lower the impact of aggravating factors in crisis situations thanks to adaptive foresight and decision-support tools - Funding scheme: FP7 - Security within the EU Agenda 2014-20.

Coordinator: GIULIO ZUCCARO

Role: Member

2014-17: METRICS - Methodologies and technologies for management and requalification of historical centres and cultural heritage buildings. Funding scheme: P.O.N.03PE_00093_5 - MIUR 2014-20 Agenda, EU co-funding. Scientific Responsible: Andrea Prota.

Role: Member

2014-17: METROPOLIS Sustainable and integrated methodologies and technologies for adjusting and safety of urban systems. Funding Scheme: P.O.N.03PE_00093_4 - MIUR 2014-20 Agenda, EU co-funding. Scientific Responsible: Gerardo Mario Verderame.

Role: Member

2014-18: RELUIS III 'Network of University Laboratories of Seismic Engineering'. Funding scheme: The Italian Civil Protection Department.

a) Thematic area: “Masonry Structures” – Task: Design and assessment of vulnerability and safety of artworks and buildings. Coordinators: S. Lagomarsino, G. Magenes, C. Modena. Research line “Numerical modeling of masonry structures made of blocks” - Scientific responsables: Claudia Casapulla, Francesco Portioli.

Role: Member of the research unit – UNINA

b) Thematic area: “Masonry Structures” - Coordinators: S. Lagomarsino, G. Magenes, C. Modena. Research line “Reparation of buildings damaged by earthquakes and resilience-based intervention

strategies – focus on ecclesiastic buildings” - Scientific responsible: Gabriele Milani, Carlo Poggi.
Role: Member of the research unit - POLIMI

c) Thematic area: “General themes”. Research line: “Seismic design of new constructions” - Task 2
“Steel and composite steel-concrete structures” - Coordinators: R. Landolfo and R. Zandonini.
Role: Member of the research unit - UNINA

2019-21: RELUIS 'Network of University Laboratories of Seismic Engineering'. Funding scheme: The Italian Civil Protection Department.

a) Thematic area WP2: “Database of existing structural and building typologies (CARTIS)” - Coordinator: G. Zuccaro. Research lines: Task 2.1 “Survey and data collection into an apposite database” and Task 2.3 “Vulnerability of masonry structures and seismic risk analysis at large scale”- Scientific responsible: Raffaele Landolfo.

Role: Member of the research unit – UNINA c

b) Thematic area WP2: “Database of existing structural and building typologies (CARTIS)” - Coordinator: G. Zuccaro. Research lines: Task 2.1 “Survey and data collection into an apposite database” and Task 2.3 “Vulnerability of masonry structures and seismic risk analysis at large scale”- Scientific responsible: Antonio Formisano.

Role: Coordinator of the research unit – UNINA g

c) Thematic area WP12: “Steel and steel-rc composite structures” - Coordinators: R. Landolfo and R. Zandonini. Research line “Standard contributions related to civil and industrial constructions made of steel and steel-rc composite structures ” - Scientific responsible: Raffaele Landolfo.

Role: Member of the research unit - UNINA

d) Thematic area WP5: “Quick execution and integrated interventions with low impact”. Coordinators: A. Prota and F. da Porto. Research line: “Quick execution and low impact interventions” - Scientific responsible: Raffaele Landolfo.

Role: Member of the research unit - UNINA

e) Thematic area WP10: “Normative contributions related to existing masonry structures”. Coordinators: G. Magenes. Research line: “Modelling of masonry spandrels and automation of out-of-plane mechanisms” - Scientific responsible: Gabriele Milani.

Role: Member of the research unit - POLIMI

2019-21: DIGIBETON “Digital prefabrication of building components in GasBeton: from design to sustainable use in housing modules 4.0”. Research line: “Support for development of innovative housing modules manufacturing processes in AAC ”. Funding scheme: POR Campania FESR 2014-2020. Scientific responsible: Dr. Eng. Costantino Menna

Role: Member of the research unit - UNINA

2019-20: Joint Research Center (JRC/E/04) – Contract from European Commission as expert to study seismic and energetic retrofitting systems of existing buildings. Funding scheme: European Committee.

Role: Leader

2021: Project DPC_RELUIS "Network of University Laboratories of Earthquake Engineering" (2019-2021). Member of the UNITS Unit (Resp. Scientific Prof. C. Amadio) in the framework of WP4 "Risk Maps and Seismic Damage Scenarios (MARS)".

Role: Member of the research unit - UNINA

2021: Project DPC_RELUIS "Network of University Laboratories of Earthquake Engineering" (2019-2021). Member of the UNINA Unit (Resp. Scientific Prof. R. Landolfo) in the framework of WP5 "Rapid execution with low impact and integrated interventions - Task 5.1 Rapid execution and low impact interventions".

Role: Member of the research unit - UNINA

2021: Project DPC_RELUIS "Network of University Laboratories of Earthquake Engineering" (2019-2021). Member of Unit n.19 UNINA-b (Resp. Scientific Prof. R. Landolfo) in the framework of WP2 CARTIS "Inventory of existing structural and building typologies".

Role: Member of the research unit - UNINA

- 2021: Project DPC_RELUIS "Network of University Laboratories of Earthquake Engineering" (2019-2021). Scientific Coordinator of Unit n.31 UNINA-g within WP2 CARTIS "Inventory of existing structural and building typologies".

Role: Leader

- May 2021-August 2022: INSIST: Intelligent monitoring system for the safety of urban infrastructures (code ARS01_00913), funded under the PON "RESEARCH AND INNOVATION" 2014 - 2020 E FSC, referred to in the notice D.D. of 13 July 2017 no. 1735

- 2022-2023: RELUIS "Network of University Laboratories of Earthquake Engineering".
Funding source: Civil Protection Department.
- Thematic area: "WP2 - Inventory of existing structural and building typologies - CARTIS" –
Coordinator: G. Zuccaro. Role: Scientific Coordinator of Research Unit n. 27 (UNINA).
- Thematic area: "WP2 - Inventory of existing structural and building typologies - CARTIS" –
Coordinator: G. Zuccaro. Role: Member of Research Unit n. 17 (UNINA) (Scientific
Coordinators Proff. Raffaele Landolfo and Gianmaria Di Lorenzo).
- Thematic area: "WP2 - Inventory of existing structural and building typologies - CARTIS" -
Task 2.3.2 "Masonry constructions" - Role: Task coordinator (with Prof. S. Lagomarsino).
- Thematic area: "WP4 - Risk Maps and Seismic Damage Scenarios (MARS)" – Coordinators:
S. Lagomarsino and A. Masi. Role: Scientific Coordinator of Research Unit n. 15 (UNINA).
- 2023: ACAMIR-RELUIS "Definition, evaluation and monitoring of the structural safety of
bridges in the Campania region with the aim of providing operational indications for preliminary
analyses and detailed safety analyses of the works" – Coordinator: M. R. Pecce. Role:
Scientific Coordinator of the UNINA research unit on the study of masonry bridges.

Committees

2005- Present: Participation as speaker in numerous national and international conferences and study journeys. By the following a list of the most relevant conferences to the proposed activities:

- 10th International Conference on Civil, Structural and Environmental Engineering
Computing, Rome, 30 August – 2 September 2005.
- XX CTA Conference, Ischia, 26-28 September 2005.
- 3rd European Conference on Computational Mechanics Solids, Structures and
Coupled Problems in
Engineering, Lisbon, Portugal, 5–9 June 2006.
- 5th International Conference "Behaviour of Steel Structures in Seismic Areas"
(STESSA 2006), Yokohama, 14-17 August 2006
- 15th UK Conference of the Association of Computational Mechanics in Engineering,
Glasgow, UK, 2-3 April 2007.
- The 2008 Seismic Engineering International Conference commemorating the 1908 Messina and
Reggio Calabria Earthquake" (MERCEA '08), Reggio Calabria, 8-11 July 2008.
- 6th International Conference "Behaviour of Steel Structures in Seismic Areas"
(STESSA 2009), Philadelphia, 16–20 August 2009.
- XXII CTA Conference, Padova, 28–30 September 2009.