

Curriculum vitae di **Dario De Domenico**

*PE8_3 Civil engineering, architecture, offshore construction, lightweight construction,
geotechnics
PE8_7 Mechanical engineering*

PERSONAL DETAILS

Family name, First name: **De Domenico, Dario**

Birthdate: 3 April 1987

Researcher unique identifier(s): ORCID: 0000-0003-1279-9529

URL for web site: <https://scholar.google.com/citations?user=l2deByIAAAAJ&hl=it>
<https://unifind.unime.it/get/person/124694>

• Education and key qualifications

28/04/2014 **PhD**
University Mediterranea of Reggio Calabria, Italy
PhD Supervisor: Prof. Paolo Fuschi, Prof. Aurora A. Pisano
2010 **Master of Science degree** in Civil Engineering *cum laude*
University of Messina, Italy

• Current position(s)

2026 – present **Associate Professor** of Structural Engineering, responsible for courses of Structural Design, Design of Structures in Seismic Zones and of Design of Earthquake Resistant Structures in the Department of Engineering, University of Messina, Italy

• Previous position(s)

2023 – 2026 Tenure-Track **Assistant Professor** (RTD B) of Structural Engineering
Department of Engineering, University of Messina, Italy
2023 – 2026 Fixed-Term **Assistant Professor** (RTD A) of Structural Engineering
Department of Engineering, University of Messina, Italy
2016 – 2020 **Research Fellow** of the C.E.R.I.S.I. (Centre of Excellence Research and Innovation of Large Dimensions Structures and Infrastructures), University of Messina, Italy
2016 - 2020 **Post-doctoral Researcher**
Department of Engineering / University of Messina / Italy
2017 **Visiting Researcher**
Laboratory of Mechanics and Materials, Aristotle University of Thessaloniki, Greece
2015 - 2016 **R&D – Project Engineer**
Soleco Engineering s.r.l., Milan, Italy
2014 - 2015 **Post-doctoral Researcher**
Department of Civil and Structural Engineering, University of Sheffield, UK

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Research achievements

- **Research metrics** as per Scopus database: **183 items, 6341 citations, *h*-index 41** [ID: 54415516300], of which 5717 citations obtained excluding self-citations (H-index without self-citations 41);
- **(2024 – to date) Scientific Director** of the Materials Testing Laboratory of the Department of Engineering at the University of Messina, coordinating experimental activities on structural materials,

seismic protection devices, bridge components, and innovative construction technologies. The laboratory operates in collaboration with public institutions and private companies for qualification, certification, diagnostics, and structural safety assessment activities, integrating full-scale experimental testing, advanced instrumentation, and numerical modelling.

- **(2025-to date) Deputy Director** of the Joint International Research Laboratory on Innovative Techniques for Earthquake Risk Mitigation established between the University of Messina (Italy) and Fuzhou University (China), coordinating international scientific activities on structural resilience, seismic protection, advanced modelling, and infrastructure risk mitigation.
- Italian Scientific Habilitation (“Abilitazione Scientifica Nazionale - ASN”) for the **qualification of Full Professor** in Structural Engineering in Italy (July 2025).
- **Patent inventor** of “Vertical Isolation Device” – a seismic isolation mechanism acting in the vertical direction. Patent number 102018000004944, granted by the Italian Patent and Trademark Office on 14/05/2020.
- **Patent inventor** of “Hybrid Friction Rubber Isolator” – a seismic isolation mechanism acting in the horizontal direction. Patent number 102018000004948, granted by the Italian Patent and Trademark Office on 18/05/2020.

Dario’s main research achievements are in the fields of:

- **Earthquake engineering** and seismic behavior of new and existing structures;
- Performance-based design and **optimization of passive vibration control devices** (seismic isolators, dampers, TMDs and inerter-based systems) for wind- and earthquake-resistant structures;
- Advanced **structural health monitoring** (SHM) techniques for safety assessment and damage identification in civil engineering structures, including buildings and bridges;

Selected 10 recent publications in the field of structures equipped with seismic protection devices:

1. **De Domenico D.**, Gandelli E., Gioitta A. (2024). *Displacement-based design procedure for the seismic retrofit of existing buildings with self-centering dissipative braces*. Structures (Elsevier), vol. 62, pp. 106174, ISSN: 2352-0124, DOI: 10.1016/j.istruc.2024.106174.
2. **De Domenico D.**, Losanno D., Vaiana N. (2023). *Experimental tests and numerical modeling of full-scale unbonded fiber reinforced elastomeric isolators (UFREIs) under bidirectional excitation*. Engineering Structures (Elsevier), vol. 274, pp. 115118, DOI: 10.1016/j.engstruct.2022.115118.
3. **De Domenico D.**, Messina D., Recupero A.A. (2022). *Quality control and safety assessment of prestressed concrete bridge decks through combined field tests and numerical simulation*, Structures (Elsevier), vol. 39, pp. 1135-1157, DOI: 10.1016/j.istruc.2022.03.086.
4. **De Domenico D.**, Gandelli E., Quaglini V. (2020). *Adaptive isolation system combining low-friction sliding pendulum bearings and SMA-based gap dampers*, Engineering Structures (Elsevier), vol. 212, pp. 110536, DOI: 10.1016/j.engstruct.2020.110536.
5. **De Domenico D.**, Hajirasouliha I. (2021). *Multi-level performance-based design optimisation of steel frames with nonlinear viscous dampers*, Bulletin of Earthquake Engineering (Springer), vol. 19(12), pp. 5015-5049, DOI: 10.1007/s10518-021-01152-7.
6. **De Domenico D.**, Ricciardi G., Takewaki I. (2019). *Design strategies of fluid viscous dampers for seismic protection of building structures: A review*, Soil Dynamics and Earthquake Engineering (Elsevier), vol. 118, pp. 144-165, DOI: 10.1016/j.soildyn.2018.12.024.
7. **De Domenico D.**, Deastra P., Ricciardi G., Sims NS., Wagg DJ. (2019). *Novel fluid inerter based tuned mass dampers for optimised structural control of base-isolated buildings*, Journal of The Franklin Institute (Elsevier), vol. 356, no. 14, pp. 7626-7649, DOI: 10.1016/j.jfranklin.2018.11.012.
8. **De Domenico D.**, Ricciardi G., Benzoni G. (2018). *Analytical and finite element investigation on the thermo-mechanical coupled response of friction isolators under bidirectional excitation*, Soil Dynamics and Earthquake Engineering (Elsevier), vol. 106, pp. 131-147, DOI: 10.1016/j.soildyn.2017.12.019.
9. **De Domenico D.**, Ricciardi G. (2018). *Optimal design and seismic performance of tuned mass damper inerter (TMDI) for structures with nonlinear base isolation systems*, Earthquake Engineering and Structural Dynamics (Wiley Online Library), vol. 47, pp. 2539-2560, DOI: 10.1002/eqe.3098.
10. **De Domenico D.**, Ricciardi G. (2018). *An enhanced base isolation system equipped with optimal Tuned Mass Damper Inerter (TMDI)*, Earthquake Engineering and Structural Dynamics (Wiley), vol. 47, pp. 1169-1192, DOI: 10.1002/eqe.3011.

First author in all above-mentioned publications, and corresponding author of all listed articles.

Speaker in >30 international conferences. Invited to deliver keynote lectures and lectures as follows:

- **Invited lecture** entitled: “*Seismic protection of structures through passive vibration control devices. Experimental insights, innovative systems and related optimization procedures*”, presented in the “Department of Civil Engineering, KU Leuven, Belgium” on 2 December 2025.
- **Invited keynote lecture** entitled “*Lightweight foamed concrete: Experimental findings on 3D-printable, fiber-reinforced and recycled variants of an innovative construction material*”, presented in the “International Seminar on Advanced Materials and Green Buildings”, College of Civil Engineering and Architecture from Southwest University of Science and Technology, online, 20 January 2022.
- **Invited lecture** entitled “*Earthquake protection of structures via seismic isolation: Current issues and innovative strategies*”, presented in the “Department of Civil and Structural Engineering, University of Sheffield, UK”, online, 29 October 2020.
- **Invited lecture** entitled: “*Innovative seismic isolation combined with inerter-based vibration absorbers*”, presented in the “Virtual Workshop on Seismic Metamaterials”, online, 9 October 2020.
- **Invited lecture** entitled: *Modelling wave dispersion in concrete and its implications in non-destructive testing techniques*, presented in the “Shechtman-Suresh Honorary Symposium”, Thessaloniki, Greece, 30 November – 3 December 2018.
- **Invited lecture** entitled: *Novel aseismic design strategies optimized by energy-based stochastic performance criteria*, presented in the Workshop on Recent Advances in Mechanics, Dynamical Systems and Probability Theory WMDP 2018, Palermo, Italy, 5-6 March 2018.

Peer recognition

- Author of several **highly cited papers** in leading international journals, including *Earthquake Engineering and Structural Dynamics*, *Soil Dynamics and Earthquake Engineering*, *Structural Concrete*, and *Construction and Building Materials*, e.g.: <https://doi.org/10.1002/eqe.3011>, <https://doi.org/10.1016/j.soildyn.2018.12.024>, <https://doi.org/10.1016/j.soildyn.2018.06.022>, ...
- Italian Scientific Habilitation (“Abilitazione Scientifica Nazionale”) for the **qualification of Full Professor** in Structural Engineering in Italy (July 2025).
- Elected as “**Junior Member**” of the “Italian Academy of Engineering and Technology” (**Accademia di Ingegneria e Tecnologia – ITATEC**), on the proposal of the Presidency Council in consideration of the scientific merits relevant to the purposes of the Academia (July 2024).
- **Included in the list of the world’s most influent researchers** (2% percentile) in the “Civil Engineering” field for citation impact from 2019-to date and for citation impact over the entire career from 2023-to date. Database available in Elsevier Data Repository at “Updated science-wide author databases of standardized citation indicators” published in <https://doi.org/10.17632/btchxktzyw.6>. <https://topresearcherslist.com/Home/Profile/786998>
- Recipient of the “**Key Program for Talent Recruitment**” award, Tongji University, Shanghai, China, for distinguished researchers and overseas talents recruitment (2019).
- **Recognition for the paper** “*An enhanced base isolation system equipped with optimal tuned mass damper inerter (TMDI)*” as one of the top cited articles in the journal “Earthquake Engineering and Structural Dynamics” (Wiley) in 2018 and 2019.
- **Recognition for the paper** “*Optimal design and seismic performance of tuned mass damper inerter (TMDI) for structures with nonlinear base isolation systems*” as one of the top cited articles in the journal “Earthquake Engineering and Structural Dynamics” (Wiley) in 2018 and 2019.
- **Recognition for the paper** “*Design strategies of fluid viscous dampers for seismic protection of building structures: A review*” as one of the top cited articles in the journal “Soil Dynamics and Earthquake Engineering” (Elsevier) in 2019 and 2020.
- **Recipient of honorable mention** in the *ACI (American Concrete Institute) Italy Chapter - Federbeton Award for the best Ph.D. thesis* defended in Italy during the period 2012-2014 in the domain of structural concrete and reinforced/pre-stressed concrete structures.
- **Associate Editor** of the Q1 journal *Structures* (Elsevier, ISSN 2352-0124) (since 2024).
- **Associate Editor** of the Q1 journal *Frontiers in Built Environment* (Electronic ISSN: 2297-3362) | *Earthquake Engineering* (since 2018);
- **Associate Editor** of the Q1 journal *Journal of Structural Design and Construction Practice* (ASCE, ISSN 2996-5136) (since 2021).
- **Editorial Board Member** of the Q1 journal “The Structural Design of Tall and Special Buildings” (Wiley, ISSN: 1541-7808) (since 2022)

- **Member of ReLUIIS** (Italian Network of Earthquake Engineering University Laboratories), participating in national research activities and working groups on seismic risk mitigation, infrastructure safety, and code-oriented methodologies.
- **Member of the Italian Association of Seismic Engineering** (ANIDIS).
- **Secretary of IADiMe**, International Association on Direct Methods. <http://www.iadime.unirc.it/>
- Selected as **Expert Reviewer** by the ANVUR for National Assessment of the Research Quality (VQR 2015-19) (September-December 2021). Reviewed n. 8 articles in the field of structural engineering.
- **Member of REPRISE** (Registered Expert Peer Reviewer for Italian Scientific Evaluation) for the subject “Fundamental research” (since May 2022).
- **Expert Reviewer** of the Czech Science Foundation, the main public funding agency in the Czech Republic (since July 2021).

ADDITIONAL INFORMATION

- 2017 – to date: Supervisor or co-supervisor of n. 9 PhD Students on structural resilience, bridge monitoring, fragility assessment, seismic protection, corrosion of prestressed structures, and innovative materials.
- 2017 – to date: Supervisor of >25 master students for the Civil Engineering course.
- 2015 – to date: Organized and chaired >15 mini-symposia and special sessions within international conferences in the field of structural engineering and seismic engineering.

Other contributions to the research community

- **Technical Responsible** for the scientific contract between the Department of Engineering of the University of Basilicata (DIST), Italy, and the Department of Engineering of the University of Messina, Italy, for the activity: “experimental investigations on the support bearings extracted from existing bridge structures” (January 2025).
- **Co-founder and Head of R&D Division** of the **Spin-off/Company** “Servizi Avanzati di Geomatica e Ingegneria Strutturale per grandi opere civili – **SAGIS srl**” created in the Department of Engineering of the University of Messina, Italy (August 2024).
- **Scientific Responsible** of the research unit of the University of Messina, partner of the team proposing the research project “ERIES-FREISUST: Fiber-Reinforced Elastomeric Isolators for seismic resilient structures with SUSTainable Solutions” supported by around 250 k€ within the Transnational Access Second Call of ERIES (Engineering Research Infrastructures for European Synergies), European Commission, 2022-2023.
- **Scientific Responsible** of Framework collaboration agreement established on 07/12/2022 between the University of Messina and the University of Beira Interior, Portugal.
- **Scientific Responsible** of the agreement for research activity entitled “Experimental testing of optimized steel plates with bolted connections” established on 16/05/2023 between the Department of Civil Engineering and Architecture – University of Beira Interior, Portugal, and the Department of Engineering – University of Messina, Italy.
- **Technical Responsible** for the scientific contract between the Department of Structures for Engineering and Architecture of the University of Naples Federico II (DIST) and the Center of Excellence Research and Innovation for Large Dimensions Structures and Infrastructures of the University of Messina (CERISI) for the activity: “Realization of experimental tests for the mechanical characterization of full-scale innovative elastomeric unbounded bearing prototypes with flexible reinforcement” (July 2020).