

PERSONAL INFORMATION

Carola Tardo



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Sex Female | Nationality Italian

WORK EXPERIENCE

01/03/2023 – Today

Assistant Professor of Architectural Engineering

Department of Civil Engineering and Architecture, University of Catania, Italy

Teaching activities: *Management of safety in construction sites and laboratory*, Degree Course in Civil, Environmental and Management Engineering

Research activity: Analysis and evaluation of construction techniques for the characterization, conservation, and renovation of the building heritage (PNRR SAMOTHRACE project).

04/02/2022 – 28/02/2023

Research Fellow of Architectural Engineering

Department of Civil Engineering and Architecture, University of Catania, Italy

Research activity: Conceiving, prototyping and demonstrating innovative timber-based panels for seismic and energy building renovation (EU H2020 e-SAFE project).

2021 - 2022

Independent professional activities in the field of Building Engineering

Main activities: design and management of building renovation projects

EDUCATION AND TRAINING

2018–2021

Ph.D. in Evaluation and Mitigation of Urban and Land Risks

Department of Civil Engineering and Architecture, University of Catania, Italy

Innovative Ph.D Programme with industrial character. Scientific disciplinary sector “CEAR-08/A - Architectural Engineering”.

Thesis title: *Seismic and energy renovation of RC framed buildings with cross-laminated timber panels equipped with innovative friction dampers*

Evaluation: approved with honors

2019

Licensed as Professional Engineer

University of Catania, Italy

2019-2020

Teacher training Course (Italian Ministerial decree 616/17)

e-Campus University

Training program contents: Educational Psychology, Cultural Anthropology, General Social Pedagogy, Teaching Methodologies and Technologies

- 02/2018 - 04/2018 Professional internship as part of the European Programme “Erasmus+ for Traineeship”.
Architecture office “Male Architekten”, Tucholskystrafse 28, 10117 Berlino, Germany
- 2012–2018 Master’s Degree in Building Construction and Architectural Engineering
Department of Civil Engineering and Architecture, University of Catania, Italy
Evaluation: 110/110 cum Laude
- 2008–2012 High school diploma in Classical Studies
Liceo Classico Statale “Mario Cutelli”, Catania, Italy
Evaluation: 100/100

RESEARCH PROJECTS

- 2023 – Today **SAMOTHRACE** “Sicilian Micronano Tech Research And Innovation Center”, PNRR,
Mission 4, Education and research - Component 2 - Investment 1.5, Spoke 1, WP6 -
Cultural Heritage, Italian Ministry of University and Research
Unit Member
- 2020 - 2022 **e-SAFE** “Energy and Seismic aFfordable rEnovation solutions”, EU H2020, Call H2020-
LC-SC3-EE-1-2018-2019-2020, Grant Agreement No. 893135
Unit Member

TECHNOLOGICAL TRANSFER

- 2023 – Today **Spin-Off**
Co-Founder of the company *WeDeSt – We Design Studio*, spin-off of the University of
Catania. The company provides design consultancy on innovative construction technologies
and materials for new and existing buildings.
- 2021 **Patent**
Inventor of the patent “Dispositivo di connessione dissipativa per pannelli in legno a strati incrociati”.
Italian National Patent N°102019000012402, 19/01/2021.

PUBLICATIONS

Contributions in journals,
books, and conference
proceedings
(* corresponding author)

2025

- C. Tardo (2025). Seismic and Energy Renovation of RC-Framed Buildings with Cross-Laminated Timber Panels Equipped with Innovative Friction Dampers. EdicomEdizioni, Monfalcone, pp. 1-132 (ISBN 979-12-81229-21-1).
- C. Tardo, G. Rodonò, G. Margani (2025). WEDEST – WE DEsign Studio. Servizi di progettazione per la riqualificazione del patrimonio edilizio. In A. Monteleone, G. Rodonò, C. Tardo (eds), Giornata Ar.Tec. 2025. La Terza Missione nel settore dell'Architettura Tecnica. Stato dell'Arte e Prospettive. Report finale. Luciano Editore, Napoli, Italy (ISBN 978-88-6026-366-7).
- C. Tardo*, L. Floriano, M. Liuzzo, A.M. Gueli, G. Stella, G. Margani (2025). Historical, Geometrical, and Constructive Analyses of the Rotonda Roman Baths in Catania (Sicily). *Buildings*, 15, 515.

2024

- L. Floriano, M. Liuzzo, G. Margani, C. Tardo* (2024). The Engineering Approach to the Study of Roman Thermal Buildings: The Case Study of the Rotonda Roman Baths at Catania. In: R. Corrao, T. Campisi, S. Colajanni, M. Saeli, C. Vinci, C. (eds), Proceedings of the 11th International Conference of Ar.Tec (Scientific Society of Architectural Engineering). Colloqui.AT.e 2024 – Volume 1, Springer, pp. 315-330.
- D. Caraccio, G. Falco, L. Floriano, R. Galvagno, A.M. Gueli, M. Liuzzo, G. Margani, G. Paladini, G. Stella, C. Tardo (2024). Un approccio interdisciplinare per lo studio e la datazione delle Terme della Rotonda a Catania. In M. C. Parelo (ed.), L'isola dei tesori. Ricerca archeologica e nuove acquisizioni. Atti del Convegno internazionale (Agrigento, Museo Archeologico Regionale "Pietro Griffo", 14-17 dicembre 2023), Ante Quem, pp.173-178.
- G. Margani, C. Tardo* (2024). Historical and constructive analysis of the Rotonda Roman baths at Catania (Sicily). In Y. Boffill, I. Lombillo, H. Blanco (eds.), Rehabend2024 - 10th Euro-American Congress on Construction Pathology, Rehabilitation Technology and Heritage Management, pp. 263–271 (ISBN: 978-84-09-58989-0).
- G. Fichera, V. Guardo, G. Margani, C. Tardo (2024). Application of a retrofit system to improve the seismic and energy performances of RC framed buildings. *Procedia Structural Integrity*, 55, 193-200.

2023

- M. Bosco, S. D'Urso, G. Margani, E. M. Marino, G. M. Nicolosi, C. Tardo* (2023). Application potentials of a 3D exoskeleton technology combined with prefabricated panels to renovate the modern building stock. In F. Fatiguso, F. Fiorito, M. De Fino, E. Cantatore (eds.), Colloqui.AT.e 2023. In transition: challenges and opportunities for the built heritage, Edicom Edizioni, Monfalcone, pp.649-660 (ISBN 979-12-81229-03-7).
- S. Barattucci, F. Barbagallo, E. M. Marino, C. Mazzotti, L. Pozza, C. Tardo (2023). A sub-assembly based technique for calibration of numerical models of infilled r.c. frames according to experimental tests". *Procedia Structural Integrity*, 44, 426–433.

2022

- C. Tardo*, G. Margani (2022). Technological analysis of a prefabricated timber-based system for the integrated renovation of RC framed buildings. *TEMA: Technologies, Engineering, Materials and Architecture* 2022, 8(2).
- D. Distefano, G. Margani, G. Rodonò, V. Sapienza, C. Tardo (2022). Progettazione tecnologica di interventi integrati di retrofit sismico ed energetico nell'ambito del progetto e-SAFE. In A. Cernaro, O. Fiandaca, R. Lione, F. Minutoli (eds.), 2030 d.C. proiezioni future per una progettazione sostenibile, Gangemi Editore, pp. 631-640 (ISBN 978-88-492-4558-5).
- S. D'Urso, G. Margani, G. M. Nicolosi, V. Pavone, L. Saija, C. Tardo (2022). Co-designing sustainability: the case of via Acquicella Porto in Catania. In A. Cernaro, O. Fiandaca, R. Lione, F. Minutoli (eds.), 2030 d.C. proiezioni future per una progettazione sostenibile, Gangemi Editore, pp. 641- 652 (ISBN 978-88-492-4558-5).
- F. Boggian, C. Tardo, A. Aloisio, E.M. Marino, R. Tomasi (2022). Experimental cyclic response of a

novel friction connection for seismic retrofitting of RC buildings with CLT panels. *Journal of Structural Engineering*, 148(5).

- G. Evola, V. Costanzo, A. Urso, C. Tardo, G. Margani (2022). Energy performance of a prefabricated timber-based retrofit solution applied to a pilot building in Southern Europe. *Building and Environment*, 222, 109442.

2021

- C. Tardo (2021). Tecnologia, ricerca e industria per la riqualificazione integrata e sostenibile del costruito moderno. In O. Castiglione, S. D'Urso (eds), *La dimensione multidisciplinare della sostenibilità. L'approccio della Bauhaus nell'epoca dell'emergenza ambientale*, Tab Edizioni, pp. 347-355 (ISBN 978-88-9295-241-6).
- F. Barbagallo, G. Margani, E. M. Marino, A. Moretti, C. Tardo* (2021). Impact of retrofit of RC framed by CLT panels and friction dampers. In M. Papadrakakis, M. Fragiadakis (eds), *Proceedings of COMPDYN 2021 - 8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, pp. 2287-2299 (ISBN: 978-618-85072-5-8).
- C. Tardo, F. Boggian, M. Hatletveit, E.M. Marino, G. Margani, R. Tomasi (2021). Mechanical characterization of energy dissipation devices in retrofit solution of reinforced concrete frames coupled with solid wood panels. In P. Roca, L. Pelà and C. Molins (eds.), *Proceedings of SAHC 2021 – 12th International Conference on Structural Analysis of Historical Constructions*, pp. 2958-2969 (ISBN: 978-84-123222-0-0).
- G. Evola, G. Margani, V. Costanzo, C. Tardo, E. M. Marino, G. Semprini, R. Tomasi, C. Halmdienst, B. Voortman (2021). The e-SAFE energy and seismic renovation solutions for the European building stock: main features and requirements. *Journal of Physics: Conference Series*, 2069, 012224 (doi:10.1088/1742-6596/2069/1/012224).
- C. Tardo*, G. Fiore, G. Margani (2021). Technological analysis of prefabricated timber-based panels for the integrated renovation of RC framed buildings. In E. Sicignano (ed.), *Colloqui.AT.e 2021: Design and construction - Tradition and innovation in the practice of architecture*, Edicom Edizioni, Monfalcone, pp. 597-611 (ISBN 978-88-96386-62-0).
- C. Tardo, F. Boggian, G. Evola, G. Margani, E. M. Marino, R. Tomasi (2021). Progetto e-SAFE: riqualificazione sismica ed energetica mediante pannelli prefabbricati in legno. *INGENIO*, n. 98 (ISSN 2307-8928).

2020

- G. Margani, G. Evola, C. Tardo*, E.M. Marino (2020). Energy, Seismic and Architectural Renovation of RC Framed Buildings with Prefabricated Timber Panels". *Sustainability* 2020, 12(12), 4845.
- G. Margani, C. Tardo* (2020). Alternative materials and technological solutions for low-income housing in tropical Africa. In I. Lombillo, H. Blanco, Y. Boffill (eds.), *Rehabend 2020 – 8th Euro-American Congress on Construction Pathology, Rehabilitation Technology and Heritage Management*, pp. 1143-50 (ISBN: 978-84-09-17873-5).
- G. Margani, G. Evola, C. Tardo*, E.M. Marino (2020). Integrated and sustainable renovation of RC framed buildings through a new timber-based envelope technology. In S.M. Cascone, G. Margani, V. Sapienza (eds), *Colloqui.AT.e 2020: New Horizons for Sustainable Architecture*, Edicom Edizioni, Monfalcone, pp. 445-456 (ISBN: 978-88-96386-94-1).

TEACHING AND TUTORING ACTIVITIES

AY 2024-2025

AY 2023-2024

AY 2022-2023

AY 2024-2025

AY 2023-2024

Co-lecturer of the course "Gestione della sicurezza nei cantieri e laboratorio", Degree Course in Civil, Environmental and Management Engineering at the University of Catania.

Lecturer of the course "Materiali per l'edilizia e tecniche costruttive" for the competition class A060 Tecnologia, Centro Alta Scuola per la Formazione degli Insegnanti, University of Catania.

- AY 2025
AY 2024
AY 2023
- Lecturer of the seminar entitled “Project *Energy and Seismic Affordable rEnovation solutions – e-SAFE*”, as part of the Course “Architectural engineering research methods and tools”, Ph.D School in “Engineering Science” at the Polytechnic University of Marche, Italy.
- 2021
- Tutoring of the “Co-design Workshop for the Seismic and Energy Renovation of Public Housing”, organized as part of the H2020 e-SAFE project at the Department of Civil Engineering and Architecture of the University of Catania (from 17.09.2021 to 16.10.2021).
- AY 2020-2021
AY 2019-2020
AY 2018-2019
- Tutoring of the course “Architettura tecnica, tipi edilizi ed efficienza energetica – Tecnologie per la progettazione sostenibile”, Degree Course in Building Construction and Architectural Engineering at the University of Catania (course lecturer: prof. G. Margani).
- 2019
- Tutoring of the Workshop “Sustainable Architecture in Uganda”, organized as part of the course “Tecnologie per la progettazione sostenibile” (AY 2018-2019), Master Degree Course in Building Construction and Architectural Engineering, University of Catania, in collaboration with the non-profit company “I bambini di Antonio Ltd” (course lecturer: prof. G. Margani)
- 2018 - Today
- Supervisor and Co-supervisor of Master degree theses on the topics of Architectural Engineering (Degree Course in Building Construction and Architectural Engineering, University of Catania).

CONFERENCES PARTICIPATION AND ORGANIZATION

Conferences Speaker

- Event “La Settimana del legno 2025”, Conference session “La valorizzazione delle costruzioni esistenti”, Roma, Italy, 25-29 march 2025.
- Conference “La Terza Missione nel Settore dell’Architettura Tecnica. Stato dell’arte e Prospettive”, Catania, Italy, 31 january 2025.
- “I International Seminar of Research in Architecture, Urban Planning, Construction, Design - Moving cross the Borders”, Salerno, Italy, 6-7 june 2024.
- “REHABEND 2024. Euro-American Congress on Construction Pathology, Rehabilitation Technology and Heritage Management”, Gijon, Spain, 7-9 may 2024.
- Seminar “Fare architettura con il legno”, Catania, Italy, 15 march 2023.
- International Conference “2030 AD. Future projections for sustainable design”, Messina, Italy, 17-19 november 2022.
- COMPDYN 2021 - 8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering”, Atene, Greece, 28-30 june 2021.
- SAHC 2021 - 12th International Conference on Structural Analysis of Historical Constructions”, Barcellona, Spain, 29-30 september/1 october 2021.
- REHABEND 2020 - Euro-American Congress on Construction Pathology, Rehabilitation Technology and Heritage Management”, Granada, Spain, 24-27 march 2020.
- Web-conference “Edifici in legno e clima mediterraneo”, organized by Federlegno Arredo, 17 september 2021.

Conferences Chair/Organizer

- Moderator and Member of the Scientific Committee of the Study Day “Conoscere e Connettere” (30.01.2025, Catania, Italy), promoted by the Italian group Dot.AT.i – Dottorandi e Dottori di Ricerca di Architettura Tecnica, in collaboration with the Italian scientific society of Architectural Engineering - Art.Tec.
- Moderator of the Conference “Sostenibilità e circolarità nel settore delle costruzioni: come cambia il paradigma”, as part of the event “EDOMED 2023 – Green Expo del Mediterraneo” (20.04.2023, Catania, Italy).

HONOURS AND AWARDS

Honours Special mention with publication dignity for the doctoral thesis entitled "Seismic and energy renovation of RC framed buildings with cross-laminated timber panels equipped with innovative friction dampers" within the DottorATI 2023 call, promoted by the Scientific Society of Architectural Engineering (Ar.Tec.). The PhD thesis was then published in the Architectural Engineering scientific series by Edicom (ISBN 979-12-81229-21-1).

PERSONAL SKILLS

Mother tongue Italian

Other language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Organisational/managerial skills

- Ability to work in multidisciplinary teams, developed by means of university and professional experiences.
- Ability to coordinate workgroups and problem-solving skills, developed by means of tutoring activities for undergraduate students, and research activities.
- Public speaking and interpersonal communication skills, developed by means of teaching and seminar activities.

Digital competence

- Excellent command of 2D/3D modelling programs: Autodesk Autocad, Autodesk ReCap 360, Rhinoceros, Blender, Lumion
- Excellent command of the OpenSees framework (TCL language)
- Excellent command of the photo editing software: Photoshop
- Excellent command of the Windows OS, suite Microsoft Office, MS Project
- Good command of the geographic information system QGIS
- Good command of the visual programming language Grasshopper and its tools Ladybug and Honeybee for energy analyses.
- Good command of the VBA (Visual Basic for Applications) script language.

Driving licence B

28th August 2025

Carola Tardo