

CURRICULUM VITAE

Maria Giovanna Masciotta

PERSONAL INFORMATION

Surname, First Name: **Masciotta, Maria Giovanna**

Nationality: **Italian**

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• EDUCATION

- 2015 Double Degree PhD in Civil Engineering (University of Minho, Portugal) and in Design and Engineering of Soil and of the Built Environment (University of Chieti-Pescara, Italy)
- 2010 Master's Degree cum laude in Architecture (5-year degree)
Faculty of Architecture, G. d'Annunzio University of Chieti-Pescara, Italy

• CURRENT POSITION

- 2024 – present Tenure-Track Assistant Professor of Structural Engineering
Dept. of Engineering and Geology, G. d'Annunzio University of Chieti-Pescara, Italy
- 2025 – present Research Associate
Mechanics of Materials and Structures Laboratory, Institute of Information Science and Technologies “A. Faedo”, National Research Council of Italy

• RESEARCH PROJECTS

- 2025 – 2030 MASONRY SURGEON-BOT (CUP: D53C25000580005)
- Principal Investigator: Prof. Enrico Spacone, University of Chieti-Pescara
 - Funding body: Italian Fund for Applied Sciences (FISA)
 - Budget: 3,225,534.94 €
 - Objective: Development of a robot/cobot for automated sensed fiber retrofitting on fair-face masonry constructions
 - Role in the project: Participant
- 2025 – 2027 BRIDGE THE GAP (CUP: D53C24003660006)
- Principal Investigator: Dr Diego Reale, IREA-CNR
 - Funding body: Ministry of University and Research (PRIN)
 - Budget: 172,803 €
 - Objective: Upgrading the bridge health monitoring with synthetic aperture radar data processing driven by structural modelling
 - Role in the project: Participant
- 2023 – 2026 TRAILED-LAB (CUP: E97G23000250001)
- Principal Investigator: Prof. Giuseppe Brando, University of Chieti-Pescara
 - Funding body: Department for Cohesion Policies
 - Budget: 5.000.000 €
 - Objective: Creation of an innovative mobile laboratory for the characterization of materials, structures and soils serving the municipalities located in the affected seismic areas
 - Role in the project: Participant

2024 – 2026 VERDI (101058684-HORIZON-INFRA-2021-SERV-01-07)

- Principal Investigator: Prof. Filippo Ubertini, University of Perugia
- Funding body: ERIES (2022-2026), Horizon Europe Framework Programme
- Budget: n.a.
- Objective: Identification of seismic damage in historic masonry towers by vibration analysis
- Role in the project: Research Unit Responsible

2024 – 2026 RELUIS WP4 – WP7

- Local Scientific Coordinators: Proff. Brando, Spacone, Masciotta, University of Chieti-Pescara
- Funding body: RELUIS – Rete dei Laboratori Universitari di Ingegneria Sismica e strutturale
- Budget: 68.750 €
- Objectives: Risk Maps and Seismic Damage Scenarios MARS-CARTIS (WP4); Post-earthquake data analysis (WP7).
- Role in the project: Research Unit Responsible

2024 – 2025 TECNODIGIT (CUP: B83C22002820006)

- Principal Investigator: Dr. Ing. Marianna Crognale, BEST DESIGN s.r.l.
- Funding body: PNRR – NextGenerationEU
- Budget: 829.407,45 €
- Objective: Development and application of advanced technologies for the creation of digital twins
- Role in the project: Participant

2024 – 2025 MULTI-TWIN (CUP: H93C22000450007)

- Principal Investigator: Prof. Luciano Caroprese, University of Chieti-Pescara
- Funding body: PNRR – NextGenerationEU
- Budget: 773.414 €
- Objective: AI-driven multi-risk analysis through digital twin
- Role in the project: WP Leader

2024 – 2025 INTERCONNECTING (CUP: B53C22004010006)

- Principal Investigator: Proff. Maria Laura De Bellis and Valentino Sangiorgio, University of Chieti-Pescara
- Funding body: PNRR – NextGenerationEU
- Budget: 220.000 €
- Objective: Sustainable conservation of built heritage through immersive digital models
- Role in the project: Participant

2023 – 2025 GEA (CUP: D53D23018650001)

- Principal Investigator: Prof. Laura Ricciotti, Luigi Vanvitelli University of Campania
- Funding body: Ministry of University and Research (PRIN)
- Budget: 300.626 €
- Objective: optimization of geopolymer formulations for their use in 3D-printing of advanced housing units in sustainable buildings
- Role in the project: Participant

2023 – 2025 STRIC (CUP: J17G22000110001)

- Local Scientific Coordinator: Prof. Guido Camata, University of Chieti-Pescara
- Funding body: Complementary Fund for Earthquake Areas 2009-2016
- Budget: 600.000 €
- Objective: Seismic safety of buildings and reduction of seismic risk
- Role in the project: Participant

2023 – 2025 GENESIS (CUP: D96G18000160005)

- Principal Investigator: Prof. Enrico Spacone, University of Chieti-Pescara
- Funding body: Ministry of University and Research (PON)
- Budget: 8.900.000 €
- Objective: Seismic risk management for the tourist enhancement of Southern Italy
- Role in the project: WP Leader

2022 – 2024 RELUIS WP2 – WP3 – WP4 – WP7

- Local Scientific Coordinators: Proff. Brando, Camata, Spacone, University of Chieti-Pescara
- Funding body: RELUIS – Rete dei Laboratori Universitari di Ingegneria Sismica e strutturale
- Budget: 37.500 €
- Objectives: Inventory of existing structural and building typologies – CARTIS (WP2); Seismic reliability of structures (WP3); Risk Maps and Seismic Damage Scenarios – MARS 2 (WP4); Post-earthquake data analysis (WP7).
- Role in the project: Participant

2019 – 2022 OPHERA (607601-CREA-1-2019-1-IT-CULT-COOP1)

- Principal Investigator: Arch. Giovanni Issini, MiBACT Regional Secretariat for the Marche
- Funding body: CREATIVE EUROPE – Culture sub-programme 2014-2020
- Budget: 200.000 €
- Objective: Sharing with the community the post-earthquake reconstruction process of Central Italy
- Role in the project: Appointed Local Responsible of Partner Institution

2019 – 2016 HeritageCare (SOE1/P5/P0258)

- Principal Investigator: Prof. Daniel Oliveira, University of Minho, Portugal
- Funding body: European Regional Development Fund (SUDOE program)
- Budget: 1.686.282,82 €
- Objective: Monitoring and preventive conservation of cultural and historical heritage
- Role in the project: Postdoc Fellow of Leading Partner

2016 – 2015 Getty Seismic Retrofitting Project (ID 100000000001975)

- Principal Investigator: Prof. Paulo Lourenço, University of Minho, Portugal
- Funding body: Getty Conservation Institute
- Budget: 214.800 \$
- Objective: Design and testing of seismic reinforcement techniques for earthen buildings
- Role in the project: Postdoc Fellow of Partner Institution

• AWARDS AND RECOGNITIONS

2021	Selected Paper for Semi-Plenary Keynote, 7th Intern. Conference on Mechanics of Masonry Structures strengthened with composite materials (MuRiCo7), online event.
2020	Erasmus+ Teaching Mobility Grant from the University of Chieti-Pescara, Italy.
2019	Grant for Young Mobility from ISTI-CNR, Pisa, Italy.
2016	Certificate of “outstanding contribution in reviewing”, International Journal of Mechanical Systems and Signal Processing (MSSP).
2015	Short Term Scientific Mission Grant from COST Action TU1402.
2015	Label of <i>Doctor Europaeus</i> from G. d’Annunzio University of Chieti-Pescara (Italy) and from the University of Minho (Portugal).

• SUPERVISION OF PHD STUDENTS AND UNDERGRADUATES

2017 – present 1 Postdoc fellow, 10 PhD students (7 graduated and 3 ongoing), 7 Master’s students and 3 Bachelor’s students from University of Minho (Portugal), Polytechnic University of Marche (Italy), University of Perugia (Italy), University of Chieti-Pescara (Italy)

- **TEACHING ACTIVITIES**

- 2025 – present Professor of Structural Monitoring and Diagnostics, Master's Degree in Engineering and Management of Cultural Heritage (LM24), G. d'Annunzio University of Chieti-Pescara
- 2021 – present Professor of Structural Design of nZEB Buildings, Master's Degree in Building Engineering (LM24), G. d'Annunzio University of Chieti-Pescara
- 2019 – 2025 Professor of Elements of Structural Engineering, Bachelor's Degree in Building Engineering (L23), G. d'Annunzio University of Chieti-Pescara
- 2017 – 2021 Lecturer of Inspection and Diagnostics, Advanced Master in Structural Analysis of Monuments and Historical Constructions, University of Minho, Portugal

- **PARTICIPATION IN COMMITTEES AND ORGANIZATION OF SCIENTIFIC MEETINGS**

- 2027 **Scientific Committee and Organising Committee Member** of the “IABSE Congress Milan 2027”, Milano, Italy.
- 2027 **Scientific Committee Member** of the “12th Int. Conference on Experimental Vibration Analysis for Civil Engineering Structures” (EVACES 2027), Perugia, Italy.
- 2026 **Scientific Committee Member** of the “22nd Int. Conference on Building Pathology and Construction Repair” (CINPAR 2026), Lisbon, Portugal.
- 2025 **Scientific Committee Member** of the “11th Int. Conference on Experimental Vibration Analysis for Civil Engineering Structures” (EVACES 2025), Porto, Portugal.
- 2023 **Scientific Committee Member** of the “ECCOMAS 7th Young Investigators Conference” (YIC 2023), Porto, Portugal.
- 2023 **Program Committee Member** of the “2nd Int. Conference on Visual Pattern Extraction and Recognition for Cultural Heritage Understanding” (VIPERC 2023), Zadar, Croatia.
- 2023 **Co-Organizer of the Special Session** “Machine Learning for Earth Observation” 22nd Int. Conference on Machine Learning and Applications (ICMLA23), Florida, USA.
- 2022 **Program Committee Member** of the “1st Int. Conference on Visual Pattern Extraction and Recognition for Cultural Heritage Understanding” (VIPERC 2022), Pescara, Italy.
- 2021 **Co-organizer of the Workshop** “Traditional and Innovative Methods for Structural Monitoring and Safety Assessment of Built Cultural Heritage” within the European project OPHERA (607601-CREA-1-2019-1-IT-CULT-COOP1), Guimarães, Portugal.
- 2019 **Co-Organizer of the Special Session** “Structural Health Monitoring and Model Updating of Heritage Structures”, 16th Int. Conference on Civil, Structural and Environmental Engineering Computing (CIVIL-COMP), Riva del Garda, Italy.
- 2018 **Co-Organizer of the Special Session** “Dynamic Testing and Structural Health Monitoring of Historic Masonry Structures”, 10th Int. Masonry Conference (IMC), Milan, Italy.
- 2018 **Co-organizer of the 3rd International Workshop** on “Traditional and Innovative Approaches in Seismic Design” (TIASD), Guimarães, Portugal.

- **PARTICIPATION AS A SPEAKER AT SCIENTIFIC CONFERENCES AND WSs**

- 2026 Speaker at “International Workshop in Engineering Research Infrastructures for European synergies (ERIES-IW2026), 25–27 May 2026, Pavia, Italy.
- 2025 Speaker at “11th International Conference on Experimental Vibration Analysis for Civil Engineering Structures” (EVACES 2025), 2– 4 July 2025, Porto, Portugal.
- 2023 Speaker at “10th International Conference on Experimental Vibration Analysis for Civil Engineering Structures” (EVACES 2023), 30 August – 1 September 2023, Milan, Italy.
- 2023 Speaker at “12th International Conference on Structural Dynamics” (EURODYN 2023), Delft, Netherlands, 3 – 5 July 2023.
- 2021 Semi-plenary keynote lecture at “7th International Conference on Mechanics of Masonry Structures strengthened with composite materials” (MuRiCo7), Online event, 24-26 November 2021.
- 2021 Speaker at “12th International Conference on Structural Analysis of Historical Constructions” (SAHC 2021), Online event, 29 September – 1 October 2021.
- 2019 Speaker at “9th International Conference on Arch Bridges” (ARCH 2019), Porto, Portugal, 2 – 4 October 2019.

- 2019 Speaker at “16th International Conference on Civil, Structural and Environmental Engineering Computing” (CIVIL-COMP 2019), Riva del Garda, Italy, 16 – 19 September 2019.
- 2019 Speaker at “Preventive Conservation of Cultural Heritage” workshop within the European project HeritageCare (SOE1/P5/P0258), Avila, Spain, 11 July 2019.
- 2018 Speaker at “10th International Masonry Conference” (IMC 2018), Milan, Italy, 9 – 11 July 2018.
- 2018 Invited speaker at the seminar “European projects on Cultural and Natural Heritage: Present and Future”, Lamego, Portugal, 21 June 2018.
- 2018 Speaker at “8th European Workshop on Structural Health Monitoring” (EWSHM 2016), Bilbao, Spain, 5 – 8 July 2016.
- 2016 Invited Speaker “1st International Workshop on Traditional and Innovative Approaches in Seismic Design” (TIASD 2016), Technical University of Munich (TUM), Germany, 31 March – 3 April 2016.
- 2014 Speaker at “9th International Masonry Conference” (IMC 2014), Guimarães, Portugal 7 – 9 July 2014.
- 2014 Speaker at “9th International Conference on Structural Dynamics” (EURODYN 2014), Porto, Portugal, 30 June – 2 July 2014.

- **MAIN INTERNATIONAL COLLABORATIONS**

Proff. Paulo Lourenço, Luis Ramos and Daniel Oliveira, University of Minho, Guimarães, Portugal
 Prof. Tiago Ferreira, University of Lisbon, Portugal
 Dr. Beatriz Zapico-Blanco, University of Seville, Spain
 Prof. Diego González-Aguilera, University of Salamanca, Avila, Spain
 Prof. Luis Javier Sánchez Aparicio, Polytechnic University of Madrid, Spain
 Prof. Nicola Tarque, Polytechnic University of Madrid, Spain
 Prof. Bahman Ghiassi, University of Birmingham, United Kingdom

- **PARTICIPATION IN EDITORIAL BOARDS**

- Editorial Board Member of Journal of Cultural Heritage (Elsevier, Online ISSN: 1778-3674, IF: 3.3)
- Editor of Cogent Engineering (Taylor & Francis Group, Online ISSN: 2331-1916, IF: 2.2)
- Editor of Frontiers in Built Environment, section: Earthquake Engineering (Frontiers Media S.A., ISSN: 2297-3362, IF: 3.0)
- Editor of Research Topic “Testing and Monitoring the Built Environment: Experimental Methods for Existing Structures and Infrastructure” in Frontiers in Built Environment, section: Structural Sensing, Control and Asset Management (Frontiers Media S.A., ISSN: 2297-3362, IF: 3.0)
- Editor of MDPI Topic “Preserving Cultural Heritage by Integrating Modern Materials and Technologies: From the Nano to Building Scale” (Applied Sciences, Buildings, Heritage, Materials, Remote Sensing, Sustainability)
- Guest Editor of Special Issue “Advanced Seismic Evaluation of Relevant Architectures” for Applied Sciences (MDPI, ISSN: 2076-3417, IF: 2.5)

- **REVIEWER ACTIVITIES**

2016 – present Advances in Engineering Software, Automation and Construction, Applied Sciences, Applied Artificial Intelligence, Bulletin of Earthquake Engineering, Buildings, Computers and Structures, Construction and Building Materials, Development in the Built Environment, Earthquake Spectra, Frontiers in Built Environment, Frontiers of Structural and Civil Engineering, International Journal of Architectural Heritage, Journal of Building Engineering, Journal of Civil Structural Health Monitoring, Journal of Masonry Research and Innovation, Journal of Cultural Heritage, Journal of Materials in Civil Engineering, Journal of Asian Architecture and Building Engineering, Journal of Building Engineering, Journal of Risk and Uncertainty in Engineering Systems, Journal of Sound and Vibration, Mechanical Systems and Signal Processing, Sensors, Shock and Vibration, Structural Control and Health Monitoring, Structural Health Monitoring, Structures.

• SCIENTIFIC PRODUCTION

Number of scientific publications:	> 95
Number of Scopus indexed publications:	86
Total citations:	1660/2226 (Scopus/Google Scholar)
h-index:	22/25 (Scopus/Google Scholar)

• MAIN PUBLICATIONS

The most important publications of the last ten years are listed hereafter. For the updated list, please refer to Scopus and Google Scholar profiles.

- [1] Hormazábal, M.F., Barontini, A., Masciotta, M.G., Oliveira, D.V. Automated damage identification for condition monitoring using short and time-varying structural responses, *Journal of Civil Structural Health Monitoring*, 16, 33 (2026), doi: 10.1007/s13349-025-01064-z.
- [2] Masciotta, M.G., Mancini, L., Cianchino, G., Ferreira, T.M., Brando, G. Sources of errors and uncertainties in large-scale seismic vulnerability assessment methods, *Journal of Building Engineering*, 111 (2025), 113477, doi: 10.1016/j.job.2025.113477.
- [3] Barontini, A., Masciotta, M.G., Amado-Mendes, P., Ramos, L.F., Lourenço, P.B. Improving damage detection by combining multiple classifiers in different feature spaces, *Engineering Structures*, 299 (2024), 117069, doi: 10.1016/j.engstruct.2023.117069.
- [4] Hormazábal, M.F., Barontini, A., Masciotta, M.G., Oliveira, D.V. A non-parametric algorithm for time-dependent modal analysis of civil structures and infrastructures, *Mechanical Systems and Signal Processing*, 204 (2023), 110802, doi: 10.1016/j.ymssp.2023.110802.
- [5] Giordano E., Masciotta M.G., Clementi F., Ghiassi B. Numerical prediction of the mechanical behavior of TRM composites and TRM-strengthened masonry panels, *Construction and Building Materials*, 397(2023), 132376, doi: 10.1016/j.conbuildmat.2023.132376.
- [6] Pellegrini, D., Barontini, A., Girardi, M., Lourenço, P.B., Masciotta, M.G., Mendes, N., Padovani, C., Ramos, L.F. Effects of temperature variations on the modal properties of masonry structures: An experimental-based numerical modelling approach, *Structures*, 53 (2023), 595-613, doi: 10.1016/j.istruc.2023.04.080.
- [7] Masciotta, M.G., Sanchez-Aparicio, L.J., Oliveira, D.V., Gonzalez-Aguilera, D. Integration of Laser Scanning Technologies and 360° Photography for the Digital Documentation and Management of Cultural Heritage Buildings, *International Journal of Architectural Heritage*, 17 (1), 56-75 (2023), doi: 10.1080/15583058.2022.2069062.
- [8] Brando G., Rapone D., Spacone E., Masciotta M.G. MUDis: A low computational effort multi-unit discretization procedure for modelling masonry walls with periodic arrangement, *Structures*, 43 (2022), 1380-1406, doi: 10.1016/j.istruc.2022.07.038.
- [9] Masciotta M.G., Pellegrini D. Tracking the variation of complex mode shapes for damage quantification and localization in structural systems, *Mechanical Systems and Signal Processing*, 169 (2022) 108731, doi: 10.1016/j.ymssp.2021.108731.
- [10] Masciotta M.G., Morais M.J., Ramos L.F., Oliveira D.V., Sánchez-Aparicio L., Gonzalez-Aguilera D. A digital-based integrated methodology for the preventive conservation of cultural heritage: the experience of HeritageCare project, *International Journal of Architectural Heritage*, 15(6), pp. 844-863 (2021), doi: 10.1080/15583058.2019.1668985.
- [11] Barontini A., Alarcon C., Sousa H.S., Oliveira D.V., Masciotta M.G., Azenha M. Development and Demonstration of a HBIM Framework for the Preventive Conservation of Cultural Heritage, *International Journal of Architectural Heritage*, (2021), doi: 10.1080/15583058.2021.1894502.
- [12] Giordano P.F., Ubertini, F., Cavalagli N., Kita A., Masciotta M.G. Four years of Structural Health Monitoring of the San Pietro Bell Tower in Perugia, Italy: two years before the earthquake versus two years after, *International Journal of Masonry Research and Innovation*, 5(4), pp. 445-467 (2020), doi: 10.1504/IJMRI.2020.111797.
- [13] Giordano E., Mendes N., Masciotta M.G., Clementi F., Sadeghi H.N., Silva R.A., Oliveira D.V. Expedient damage index for arched structures based on dynamic identification testing, *Construction and Building Materials*, 265 (2020) 120236, doi: 10.1016/j.conbuildmat.2020.120236.

- [14] Kita A., Cavalagli N., Masciotta M.G., Lourenço P.B., Ubertini F. Rapid post-earthquake damage localization and quantification in masonry structures through multidimensional non-linear seismic IDA, *Engineering Structures*, 219 (2020) 110841, doi: 10.1016/j.engstruct.2020.110841.
- [15] Masciotta M.G., Pellegrini D., Brigante D., Barontini A., Lourenço P.B., Girardi M., Padovani C., Fabbrocino G. Dynamic characterization of progressively damaged segmental masonry arches with one settled support: experimental and numerical analyses, *Frattura ed Integrità Strutturale*, 51, pp. 423-441 (2020), doi: 10.3221/IGF-ESIS.51.31.
- [16] Barontini A., Perera R., Masciotta M.G., Amado-Mendes P., Ramos L.F., Lourenço P.B. Deterministically generated negative selection algorithm for damage detection in civil engineering systems, *Engineering Structures*, 197, 109444 (2019), doi: 10.1016/j.engstruct.2019.109444.
- [17] Pellegrini D., Girardi M., Lourenço P.B., Masciotta M.G., Mendes N., Padovani C., Ramos L.F. Modal analysis of historical masonry structures: linear perturbation and software benchmarking, *Construction and Building Materials*, 189, pp. 1232-1250 (2018), doi: 10.1016/j.conbuildmat.2018.09.034.
- [18] Masciotta M.G., Ramos L.F., Lourenço P.B., Vasta M. Spectral algorithm for non-destructive damage localisation: Application to an ancient masonry arch model, *Mechanical Systems and Signal Processing*, 84 (Part A), pp. 286-30 (2017), doi: 10.1016/j.ymssp.2016.06.034.
- [19] Masciotta M.G., Ramos L.F., Lourenço, P.B. The importance of structural monitoring as a diagnosis and control tool in the restoration process of heritage structures: a case-study in Portugal, *Journal of Cultural Heritage*, 27, pp. 36-47 (2017), doi: 10.1016/j.culher.2017.04.003.
- [20] Masciotta M.G., Roque J.C.A., Ramos L.F., Lourenço P.B. A multidisciplinary approach to assess the health state of heritage structures: The case study of the Church of Monastery of Jerónimos in Lisbon, *Construction and Building Materials*, 116, pp. 169-187 (2016), doi: 10.1016/j.conbuildmat.2016.04.146.
- [21] Masciotta M.G., Ramos L.F., Lourenço P.B., Vasta M., De Roeck G. A Spectrum-driven Damage Identification Technique: Application and Validation through the Numerical Simulation of the Z24 Bridge, *Mechanical Systems and Signal Processing*, 70-71, pp. 578-600 (2016), doi: 10.1016/j.ymssp.2015.08.027.