Daniele Sivori, PhD

Fixed-term Researcher type a (RTDa)
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(a) Education

2017–2020	PhD in *Civil, Chemical and Environmental Engineering*, Curriculum: *Structural and Geotechnical Engineering, Mechanics and Materials* DICCA, University of Genoa Awarded on 04/05/2021 with distinction: *Unanimously Excellent*
2017	Professional Engineering License (Sec. A), University of Genoa Obtained in the 2nd session of 2016
2010–2016	Single-cycle Master's Degree in *Building Engineering-Architecture* (LM-4 C.U.), University of Genoa Awarded on 22/07/2016 with a grade of: *110/110 cum laude*

(b) Research activity

DS's research focuses on the following topics in Structural and Seismic Engineering, with a particular emphasis on the structural monitoring of existing structures for risk mitigation and the conservation of historical and monumental built heritage:

- structural modeling, calibration, and simulation of the seismic and modal response of existing masonry buildings;
- analysis methods for seismic safety assessment;
- vulnerability and seismic risk analysis at urban and territorial scales;
- dynamic and ambient vibration measurements on civil structures and infrastructures;
- structural and seismic monitoring of historical assets;
- inverse problems in dynamic identification, structural identification, and optimization;
- satellite remote sensing for assessing the behavior of civil structures at a territorial scale.

Since 2023, he has been a Fixed-term Researcher type a (RTDa) at DICCA, University of Genoa, in the academic recruitment field 08/B3 - Structural Engineering, SSD ICAR/09 – Structural Engineering, and is the lecturer in charge of the course *Structural Design + Laboratory* in the Master's Degree program in Building Engineering-Architecture.

Since 2022, he has been a *Reviewer* for several international scientific journals in the field, including *Bulletin of Earthquake Engineering, Engineering Structures, Nonlinear Dynamics, Journal of Civil Structural Health Monitoring, Sensors, Built Heritage, International Journal of Architectural Heritage*.

He is a member of the ANVUR Register of Experts as an External Reviewer for the Research Quality Assessment (VQR) 2020-2024.

He organizes minisymposia on topics related to structural monitoring, including the Special Session *SS17 - Advances in Structural Health Monitoring for Masonry Structures* at the upcoming conference of the Italian National Association of Seismic Engineering, XX Convegno ANIDIS, September 2025, Assisi, association of which he has been a member since 2017.

He was a member of the *Local Committee* of the international symposium *Third International Symposium on Dynamics and Aerodynamics of Cables* (ISDAC2023), Rome, 15-17 June 2023.

He contributed to the development of the *Guidelines for the Use of Satellite Interferometric Data for the Interpretation of Structural Behavior of Buildings* (Ch. 5, Ordinary and strategic masonry buildings, and Ch. 10, Case studies) within the DPC-ReLUIS project, Working Package 6 - Task 6.1 (2019-2021) and Task 6.2 (2022-2024).

Research Contracts

Apr. 2023–present — Holder of a Fixed-term Researcher contract type a (RTDA) at DICCA, University of Genoa

D.R. n. 1580 of 3.4.2023, academic recruitment field 08/B3 - Structural Engineering, SSD ICAR/09 – Structural Engineering, PNRR Project RETURN *"Multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate"*
Full-time research activity within the PNRR RETURN Project, Spoke 5 – TS1: Urban and metropolitan settlements, focused on modeling, assessment, and management of multi-risk in urban areas. Physics-based seismic scenario simulations at a territorial scale, site-city interaction effects, integration with urban-scale structural monitoring networks.

Dec. 2022–Apr. 2023 — Holder of a postdoctoral research grant funded by Fondazione CARIGE at DICCA, University of Genoa

D.R. n. 4393 of 14.10.2022, Program n. 4 *"Strategie integrate di monitoraggio strumentale e modellazione numerica per la valutazione della sicurezza sismica di edifici a carattere monumentale e strategico"* (SSD ICAR/09)
Development of integrated strategies combining experimental measurements from continuous dynamic monitoring typical of *Structural Health Monitoring* (SHM) with computational modeling, aiming to ensure accurate and rapid assessments of the structural integrity of the monitored structure following a seismic event (entity, extent, and location of damage) based on experimental spectral information (frequencies, modes, damping). The research is primarily aimed at masonry construction, with particular reference to strategic and monumental structures.

Oct.–Nov. 2022 — Holder of a postdoctoral research grant at DICCA, University of Genoa
D.R. n. 2821 of 29.06.2022, Program n. 22 *"Model-based data-informed strategies for the seismic safety assessment of masonry buildings"* (SSD ICAR/09)

Mar.–Sep. 2022 — Holder of a postdoctoral fellowship funded by the Inter-university Consortium ReLUIS,
Di.St., University of Naples Federico II (at DICCA, University of Genoa)
Call n. 4 of 21.02.2022, Agreement DPS-DCSTLGP - ReLUIS CUP F52C21000140001 *"Attività di supporto per Screening di vulnerabilità sismica"*
Implementation in MATLAB of a semi-automatic procedure for the use of the simplified model *DBV-masonry* for the seismic vulnerability assessment of masonry barracks.

Jun.–Dec. 2021 — Holder of a "Consolidator" postdoctoral fellowship at DICCA, University of Genoa
D.R. n. 4785 of 23.11.2020, *"Uso di dati interferometrici satellitari e di identificazione dinamica a supporto delle valutazioni di sicurezza di costruzioni esistenti in muratura"*

Jan.–Apr. 2021 — Holder of a research support contract at DICCA, University of Genoa
Prot. Us. 74180/2020 of 23.12.2020, *"Valutazioni di vulnerabilità sismica di edifici a carattere strategico a fini comparativi per la redazione di lista di priorità a supporto di politiche di mitigazione a larga scala"*
Application of seismic vulnerability models to existing strategic buildings using simplified mechanical-based models and detailed models on a prototype building, aimed at calibrating and validating simplified approaches for creating priority lists.

Collaboration Contracts

Jul.–Dec. 2017 — Coordinated and continuous collaboration contract
DICCA, University of Genoa
"Esecuzione di analisi nonlineari statiche e dinamiche su edifici reali danneggiati da eventi sismici e approfondimenti in relazione all'applicazione della procedura SMAV"

Jan.–Apr. 2017 Occasional collaboration contract
DICCA, University of Genoa
"Analisi di sensibilità per la definizione del piano delle indagini propedeutiche alla valutazione della sicurezza sismica dell'edificio in struttura mista dell'Ex. Clinica Dermatologica sito a Genova in Viale Benedetto XI, n.7"

Participation in National Research Projects as a Research Unit (RU) Member

2024–present MONNALISA Project
"MONitoring of dyNAmic behaviour of structures for LIfe cycle assessment enhanced by SAtellite data"
Data fusion of satellite and on-site vibration monitoring data to support decision-making processes in assessing the health condition of existing structures.

2024–present DPC-ReLUIS Project, Working Package 6 - Task 6.4 (2024-2026). 19 RUs involved.
"WP6: Monitoraggio e dati satellitari, Task 6.4 Dati dell'Osservatorio Sismico delle Strutture (OSS)"
Analysis of seismic and ambient dynamic monitoring data acquired by the OSS on strategic structures monitored nationwide for health condition assessment via SHM and for the development of a typological database of vibrational response.

2022–2024 DPC-ReLUIS Project, Working Package 5 - Task 5.6 (RUs: UniNA, UniBAS, UniBO, UniMOL, UniRO TV, UniPD, IUAV, UniGE-b, CNR-IREA, ITC-CNR)
"WP5: Progetti speciali, Task 5.6: Monitoraggio di ponti con dati satellitari"
Use of satellite data and on-site monitoring for the assessment of the structural condition of bridges.

2022–2024, 2019–2021 DPC-ReLUIS Project, Working Package 6 - Task 6.1 (2019-2021), Task 6.2 (2022-2024), 19 RUs involved
"WP6: Monitoraggio e dati satellitari, Task 6.1: Edifici ordinari e strategici in muratura, Task 6.2: Sistemi innovativi di monitoraggio on site"
Use of continuous dynamic monitoring data, together with satellite interferometry data, for the assessment of the structural condition of buildings (SHM). Applications at urban scale on ordinary masonry buildings located in Rome, on monumental and strategic masonry buildings monitored by the Seismic Observatory of Structures (OSS). Contribution to the development of case studies and the drafting of the *Guidelines for the Use of Satellite Interferometric Data for the Interpretation of Structural Behavior of Buildings* (Ch. 5, Ordinary and strategic masonry buildings, and Ch. 10, Case studies).

2019–2024 PRIN 2017 Project (RUs: UniNA, UniGE-b, UniBO, UniPG)
"DETECT-AGING - Degradation Effects on sTructural safEty of Cultural heriTAGe constructions through simulation and health monitorING"
Use of continuous dynamic monitoring data from the masonry building of the Palazzo dei Consoli in Gubbio (PG) for the calibration of structural models (finite element, equivalent frame) to support rapid assessments of the structure's health condition (SHM).

2021–2022 UniGE Scientific Equipment Grant, Interdepartmental research group DICCA-DISTAV
"Strumentazione di misura per monitoraggi temporanei strutturali e sismici, per la caratterizzazione dinamica di strutture, infrastrutture e terreni"
Proposer of the research project related to the acquisition of scientific equipment for ambient and seismic vibration monitoring, proposal awarded funding of €39,200 in the *medium equipment* category.

2017–2018 DPC-ReLUIS Project 2017-2018, Working Package 4 - Task 4.1 (RUs: UniGE-b, PoliTO, UniCH, UniPD, UniPV)
"WP4: Analisi della risposta strutturale a seguito dei recenti eventi sismici, Task 4.1: Analisi di edifici in muratura monitorati dall'OSS"

Use of ambient and seismic vibration monitoring data from four masonry structures monitored by the OSS and affected by the 2016-2017 Central Italy earthquake, aimed at assessing the level of damage induced by the earthquake, calibrating structural models, and simulating the seismic response using accelerometric measurements at the base.

Dec. 2016 DPC-ReLUIS
Attività di sopralluogo nelle scuole danneggiate dal sisma del Centro Italia, Gruppo di lavoro Proff. C. Calderini e S. Lagomarsino
On-site inspections in Central Italy aimed at surveying the damage suffered by various schools and strategic buildings following the 2016 seismic sequence, as part of the broader activity promoted by the Extraordinary Commissioner for Reconstruction Vasco Errani through the ReLUIS consortium and the DPC. Among them is the emblematic case of the Pietro Capuzi school in Visso, monitored by the OSS.

Participation in Research Agreements

2019–present Agreement with Regional Secretariat of the Ministry of Culture for Liguria-DICCA (coord. by Prof. Sergio Lagomarsino and Prof. Serena Cattari)
"Valutazione della sicurezza sismica LV3 della Cattedrale di San Lorenzo in Genova"
Historical-critical analysis, experimental investigation plan, development of a finite element model calibrated on permanent dynamic monitoring data for the seismic vulnerability assessment (LV3) of the cathedral.

2019–present Agreement with Superintendence of Archaeology, Fine Arts and Landscape (SABAP) Genoa-DICCA (coord. by Prof. Sergio Lagomarsino and Prof. Serena Cattari)
"Sicurezza statica e sismica della cattedrale di San Lorenzo in Genova"
Ambient vibration measurements on the bell tower of the Cathedral of San Lorenzo in Genoa, aimed at calibrating simplified models of the tower (LV1) and detailed models of the lantern (finite elements) for seismic vulnerability and structural retrofitting assessments. Design and installation of a permanent dynamic monitoring system for real-time assessment of the structure's health condition (SHM).

2020–2021, 2019–2020, 2018–2019 Agreement DPC-Liguria Region - DICCA (coord. by Prof. Serena Cattari)
"Prevenzione del rischio sismico: progetto SMAV Liguria"
Ambient vibration measurements on 18 strategic masonry and reinforced concrete buildings located in 14 municipalities in Liguria for the rapid assessment of seismic operability using the simplified "Seismic Model from Ambient Vibrations" (SMAV) methodology. Vulnerability assessment and simulation of potential damage scenarios at the municipal level based on information gathered from the analysis of the Emergency Limit Condition (CLE).

Participation in research activities aimed at drafting pre-normative documents

2019–present CNR Working Group (RUs: UniPV, UniNA, UniPR, UniGE coord. by Prof. Sergio Lagomarsino, UniBO)
Linee Guida "Guide to a proper use of software tools for structural design"
Contribution to the research activities and drafting of the technical document for the use of calculation software in structural analysis (Ch. 7, *Benchmarks*, in progress).

Doctoral and Master's Thesis Research Projects

2017–2020 PhD Thesis (supervisors: Prof. Serena Cattari, Prof. Marco Lepidi)
"Ambient vibration tools supporting the model-based seismic assessment of existing buildings"

Development of tools to support rapid seismic safety analyses of existing buildings based on ambient vibration measurements. The research pays particular attention to the seismic vulnerability of existing masonry buildings, for which it proposes specific *frequency-based* fragility curves that associate permanent changes in the structure's natural frequencies, identified after a seismic event, with the expected level of structural damage, based on simulations on calibrated equivalent frame models.

a.y. 2015-2016 — Master's Thesis (supervisor: Prof. Serena Cattari)
"Strumenti per la valutazione del rischio sismico: analisi della Condizione Limite per l'Emergenza (CLE) della città di Sanremo"
Ambient vibration measurements on strategic structures in the municipality of Sanremo (IM) for the estimation of seismic operability using the rapid SMAV methodology, comparison with predictions from calibrated equivalent frame models. Analysis of the CLE for seismic vulnerability assessments of the urban settlement and simulation of potential damage scenarios for different return periods of the seismic event.

(c) Teaching Activity

Teaching

a.y. 2025-2026, 34 hours — Lecturer in charge, DICCA, University of Genoa
Lecturer for the course *Structural Design: Structural Aspects* (ICAR/09) in the 2nd year of the Master's Degree in *Building Engineering-Architecture* (LM-24)

a.y. 2024-2025, 40 hours — Lecturer in charge, DICCA, University of Genoa

a.y. 2023-2024, 20 hours — Lecturer for the course *Structural Design + Laboratory* (ICAR/09) in the 2nd year of the Master's Degree in *Building Engineering-Architecture* (LM-24)

a.y. 2024-2025, 9 hours — Lecturer in charge, DICCA, University of Genoa
Lecturer for the PhD course *Satellite remote sensing: monitoring natural and built environments for risk management* within the *PhD Program in Security, Risk and Vulnerability*

Teaching and Tutoring Assistance

a.y. 2022-2023, 20 hours — Teaching assistance contract, DICCA, University of Genoa
Teaching assistant for the course *Structural Mechanics* (ICAR/08) in the 1st year of the Master's Degree in *Engineering for Building Retrofitting* (LM-24)

a.y. 2022-2023, 20 hours — Teaching assistance contract, DAD, University of Genoa
Teaching assistant for the course *Structural Morphology* (ICAR/08) in the 1st year of the Master's Degree in *Architectural Composition* (LM-4)

a.y. 2022-2023, 25 hours, a.y. 2021-2022, 25 hours — Teaching assistance contract, DITEN, University of Genoa
Teaching assistant and *Cultore della Materia* in the examination committee for the course *Structural Mechanics* (ICAR/08) in the 2nd year of the Bachelor's degree programs in *Naval Engineering*, *Electrical Engineering* (L-9)

a.y. 2021-2022, 15 hours — Teaching assistance contract, DICCA, University of Genoa

Teaching assistant for the course *Infrastructure Management and Monitoring* (ICAR/09) in the 2nd year of the Master's Degree in *Civil Engineering* (LM-23)

a.y. 2020-2021, 25 hours, a.y. 2019-2020, 30 hours, a.y. 2018-2019, 25 hours — Didactic tutoring contract, DICCA, University of Genoa

Didactic tutor for the Master's Degree in *Building Engineering-Architecture* (LM-4, formerly LM-4 C.U.)

Co-supervisor of PhD Theses

a.y. 2023-present — MGB Merani. *"Development of decision support tools based on SHM data and low-cost sensors for seismic damage scenario at urban scale and for assessing the structural usability and safety of strategic buildings"*. PhD Program in *Security, Risk and Vulnerability*, Curriculum *Risk and Resilience Engineering for the Natural, Industrialized and Built Environments* (RRENIB), XXXIX cycle.

Co-supervisor of Master's Theses

a.y. 2022-2023 — MGB Merani. *"Uso di dati di monitoraggio strutturale a supporto di valutazioni di sicurezza sismica: applicazione al Palazzo degli Elefanti in Catania"*. Master's Degree in *Civil and Environmental Engineering*.

a.y. 2018-2019 — F Cereseto. *"Valutazione dell'operatività sismica di edifici strategici: applicazione della metodologia SMAV al Municipio di Alassio"*. Master's Degree in *Civil and Environmental Engineering*.

a.y. 2017-2018 — A Brunelli. *"Simulazione numerica della risposta sismica della scuola di Visso danneggiata dal terremoto del centro Italia 2016"*. Master's Degree in *Civil and Environmental Engineering*.

a.y. 2017-2018 — S Parodi. *"Analisi della sicurezza sismica, simulazione del danno e definizione dei criteri di intervento nel Municipio di Recanati"*. Master's Degree in *Civil and Environmental Engineering*.

a.y. 2016-2017 — A Oliveri. *"Verifica di sicurezza sismica di un edificio esistente misto muratura-cemento armato: uso dell'analisi di sensibilità per la definizione del piano delle indagini"*. Master's Degree in *Civil and Environmental Engineering*.

(d) Speaker at National and International Conferences

2025 — Speaker at international conference
11th International Conference on Experimental Vibration Analysis for Civil Engineering Structures (EVACES), Porto, Portugal, 2–4 July
"Isospectral Equivalent Frame models for seismic SHM of masonry buildings"

2024 — Speaker at international conference
10th International Operational Modal Analysis Conference (IOMAC), Naples, 22–24 May
"Isospectral identification for the Equivalent Frame modeling of buildings"

2024 — Speaker at national conference
PRIN DETECT-AGING Final Workshop, Aula Magna - Campus of Engineering, Perugia, 24 January
"Developments in the use of equivalent frame modeling to support the structural monitoring of historic masonry constructions UNIGE's experience in the DETECT-AGING Project"

2022 Speaker at national conference
XIX Convegno ANIDIS - L'Ingegneria Sismica in Italia, Turin, 11–15 September
"Nonlinear static analyses to improve the seismic damage assessment of monitored masonry palaces: application to the Consoli Palace of Gubbio, Italy"

2021 Speaker at international conference
17th World Conference on Earthquake Engineering (17WCEE), Streaming from Sendai, Japan, 27 September–2 October
"Testing the dynamic behaviour of floor diaphragms for the seismic assessment of URM buildings"

2021 Speaker at international conference
8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2021), Streaming from Athens, Greece, 28–30 June
"Calibration of numerical models to support SHM: the Consoli Palace of Gubbio, Italy"

2019 Speaker at international conference
14th International Workshop on Advanced Smart Materials and Smart Structures Technology (ANCRiSST 2019), Rome, 18–21 July
"Vibration data processing to assess the rigidity of diaphragms in existing building"

2019 Speaker at national conference
XVIII Convegno ANIDIS - L'Ingegneria Sismica in Italia, Ascoli Piceno, 15–19 October
"Assessment of the rigid behaviour of diaphragms from ambient vibration measurements: application to masonry buildings in pre- and post-earthquake conditions"

2018 Speaker at international conference
9th International Conference on Computational Methods (ICCM 2018), Rome, 6–10 August
"Ambient vibration testing of existing buildings aimed to seismic assessment: experiences in Liguria"

2018 Speaker at international conference
10th International Masonry Conference (10IMC), Milan, 9–11 July
"Operational issues in the dynamic identification of URM buildings targeted to seismic assessment"

2017 Speaker at national conference
XVII Convegno ANIDIS - L'Ingegneria Sismica in Italia, Pistoia, 17–21 September
"Reliability of the SMAV procedure applied to unreinforced masonry buildings: the case study of Sanremo city hall"

(e) Publications

Scientific Journals

1. Gian Piero Lignola, Nicola Buratti, Serena Cattari, Fulvio Parisi, Filippo Ubertini, Sara Alfano, Laura Ierimonti, Andrea Meoni, Daniele Sivori, and Giorgio Virgulto. Validated and Optimized Strategies for Preserving Historical Heritage Towards Natural and Anthropic Risks: Insights from the DETECT-AGING Project. *Buildings*, 15(5), 2025. doi:10.3390/buildings15050693.
2. Daniele Sivori, Margherita Merani, Flavio Bocchi, Daniele Spina, and Serena Cattari. Environmental effects on the experimental modal parameters of masonry buildings: experiences from the Italian Seismic Observatory of Structures (OSS) network. *Journal of Civil Structural Health Monitoring*, 15(2):307 – 331, 2025. doi:10.1007/s13349-024-00847-0.
3. Daniele Sivori, Marco Lepidi, and Serena Cattari. Analytical identification of dynamic structural models: Mass matrix of an isospectral lumped mass model. *Earthquake Engineering and Structural Dynamics*, 53(8):2447 – 2467, 2024. doi:10.1002/eqe.4126.
4. Stefania Degli Abbati, Daniele Sivori, Serena Cattari, and Sergio Lagomarsino. Ambient vibrations-supported seismic assessment of the Saint Lawrence Cathedral's bell tower in Genoa, Italy. *Journal of Civil Structural Health Monitoring*, 14 (1):121 – 142, 2024. doi:10.1007/s13349-023-00709-1.

5. Daniele Sivori, Laura Ierimonti, Ilaria Venanzi, Filippo Ubertini, and Serena Cattari. An Equivalent Frame Digital Twin for the Seismic Monitoring of Historic Structures: A Case Study on the Consoli Palace in Gubbio, Italy. *Buildings*, 13(7), 2023. doi:10.3390/buildings13071840.
6. Daniele Sivori, Serena Cattari, and Marco Lepidi. A methodological framework to relate the earthquake-induced frequency reduction to structural damage in masonry buildings. *Bulletin of Earthquake Engineering*, 20(9):4603 – 4638, 2022. doi:10.1007/s10518-022-01345-8.
7. Daniele Sivori, Marco Lepidi, and Serena Cattari. Structural identification of the dynamic behavior of floor diaphragms in existing buildings. *Smart Structures and Systems*, 27(2):173 – 191, 2021. doi:10.12989/sss.2021.27.2.173.
8. Daniele Sivori, Marco Lepidi, and Serena Cattari. Ambient vibration tools to validate the rigid diaphragm assumption in the seismic assessment of buildings. *Earthquake Engineering and Structural Dynamics*, 49(2):194 – 211, 2020. doi:10.1002/eqe.3235.

Conference Proceedings

9. Daniele Sivori, Marco Lepidi, and Serena Cattari. Isospectral Stiffness Matrix Identification for the Equivalent Frame Modeling of Buildings. *Lecture Notes in Civil Engineering*, 515 LNCE:401 – 409, 2024. doi:10.1007/978-3-031-61425-5_39.
10. Daniele Sivori, Serena Cattari, Sara Alfano, Laura Ierimonti, Ilaria Venanzi, and Filippo Ubertini. Nonlinear static analyses to improve the seismic damage assessment of monitored masonry palaces: application to the Consoli Palace of Gubbio, Italy. In *Procedia Structural Integrity*, volume 44, page 2090 – 2097, 2022. doi:10.1016/j.prostr.2023.01.267.
11. Serena Cattari, Daniele Sivori, Sara Alfano, Laura Ierimonti, Nicola Cavalagli, Ilaria Venanzi, and Filippo Ubertini. Calibration of numerical models to support SHM: the Consoli Palace of Gubbio, Italy. In *Proceedings of the 8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2021)*, volume 2021-June, page 3778 – 3794, 2021. doi:10.7712/120121.8746.19251.
12. Daniele Sivori, Serena Cattari, and Marco Lepidi. Testing the dynamic behaviour of floor diaphragms for the seismic assessment of URM buildings. In *Proceedings of the 17th World Conference on Earthquake Engineering (17WCEE)*, pages 1–12 (3b–0067), 2020.
13. Daniele Sivori, Marco Lepidi, and Serena Cattari. Vibration data processing to assess the rigidity of diaphragms in existing building. In *ANCRiSST 2019 Procedia: the 14th International Workshop on Advanced Smart Materials and Smart Structures Technology*, pages 65–68, 2019.
14. Daniele Sivori, Serena Cattari, and Marco Lepidi. Assessment of the rigid behaviour of diaphragms from ambient vibration measurements: application to masonry buildings in pre and post-earthquake conditions. In *Atti del XVIII Convegno ANIDIS*, pages 112–121, 2019 (in Italian).
15. Serena Cattari, Daniele Sivori, Andrea Brunelli, Stefania Sica, Annachiara Piro, Filomena de Silva, Fulvio Parisi, and Francesco Silvestri. Soil-structure interaction effects on the dynamic behaviour of a masonry school damaged by the 2016–2017 central italy earthquake sequence. In *Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions- Proceedings of the 7th International Conference on Earthquake Geotechnical Engineering, 2019*, page 1655 – 1663, 2019.
16. Daniele Sivori, Marco Lepidi, and Serena Cattari. Operational issues in the dynamic identification of URM buildings targeted to seismic assessment. In *Proceedings of the International Masonry Society Conferences*, volume 0, page 2367 – 2379, 2018.
17. Serena Cattari, Daniele Sivori, Daria Ottonelli, Stefania Degli Abbati, Daniele Spina, Gianluca Acunzo, Noemi Fiorini, Gabriele Ferretti, and Roberto De Ferrari. Reliability of the SMAV procedure applied to unreinforced masonry buildings: the case study of Sanremo city hall. In *Atti del XVII Convegno ANIDIS*, pages 492–502, 2017 (in Italian).
18. Chiara Calderini, Serena Cattari, Stefano Podestà, Lorenzo Scandolo, and Daniele Sivori. Vulnerability and seismic response of school buildings: lessons from the 2016 Central Italy event. In *Atti del XVII Convegno ANIDIS*, pages 43–55, 2017 (in Italian).

(f) Skills

Language

- English: B2, French: A2;

IT

- hardware and data acquisition: Verilog, LabView;
- programming: C++, Matlab, Python, Mathematica;

Scientific and Technical

- equivalent frame and finite element structural modeling of civil structures;
- simulation of nonlinear static and dynamic seismic response of masonry buildings for seismic safety assessments;
- seismic vulnerability assessment of existing buildings to support risk mitigation policies at urban and territorial scales;
- acquisition, processing, pre- and post-processing of dynamic vibration measurements on civil structures;
- input-output and output-only dynamic identification techniques for linear time-invariant systems, time-frequency analysis techniques for non-stationary processes;
- post-processing techniques for satellite interferometry measurements for structural health assessment;
- perturbative techniques for the approximate analytical solution of direct and inverse problems in structural mechanics.