

Gerard J. O'Reilly

Associate Professor

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 [GitHub](#)

 [LinkedIn](#)

 [Scopus](#)

 [Google Scholar](#)

Appointments

Current

- Associate Professor of Structural Engineering @ Centre for Training and Research on Reduction of Seismic Risk (ROSE Centre), [IUSS Pavia](#), Italy December 2023 - present
- Affiliated Researcher @ [EUCENTRE Foundation](#), Pavia, Italy Jan 2014 – present

Other

- Member of the Doctoral Advisory Board (*Collegio dei docenti*) for PhD programme in Earthquake Engineering (ROSE) @ [IUSS Pavia](#), Italy April 2024 - present
- Member of the Advisory Board (*Comitato di Coordinamento*) @ [EUCENTRE Foundation](#), Pavia, Italy Jan 2024 – present

Past

- Assistant Professor (*Ricercatore a tempo determinato Tipo A*) of Structural Engineering @ Centre for Training and Research on Reduction of Seismic Risk (ROSE Centre), [IUSS Pavia](#), Italy May 2019 - November 2023
- Visiting Researcher @ [Kobori Research Complex](#), Tokyo, Japan Nov 2019 – Dec 2019
- Post-doctoral Researcher @ Centre for Training and Research on Reduction of Seismic Risk (ROSE Centre), [IUSS Pavia](#), Italy Mar 2017 – Apr 2019
- Visiting Researcher @ [University of California, Berkeley](#), USA Sept 2011 – Aug 2012

Education

- Ph.D in Earthquake Engineering & Engineering Seismology, [IUSS Pavia](#), Italy 2016
- M.Sc. in Civil Engineering, [University of Galway](#), Ireland 2013
- B.Eng. in Civil Engineering, [University of Galway](#), Ireland 2010

Honours & Awards

- Awarded Editor's Featured Paper Award by Engineering Structures for paper on "Next-generation non-linear and collapse prediction models for short to long period systems via machine learning methods"
- Listed among the "Top 2% of Scientists Worldwide" in ranking compiled by Stanford University [[Link](#)]
- 2022 recipient of the Shah Family Innovation Prize by the Earthquake Engineering Research Institute to honour an individual under the age of 35 for creativity, innovation and an entrepreneurial spirit in earthquake risk mitigation and management [[Link](#)]
- Selected by editor as "Top Reviewer" for the journal Bulletin of Earthquake Engineering in 2020
- Won the [2020 Outstanding Paper Award](#) by the International Association for Bridge and Structural Engineering for the research article: [Once upon a Time in Italy: The Tale of the Morandi Bridge](#)
- Awarded "Top Downloaded Paper 2018-2019" by Earthquake Engineering and Structural Dynamics for the article: [Conceptual design in performance-based earthquake engineering](#)

- Awarded a fellowship by the University of California Education Abroad Program to complete a 1-year research exchange at the University of California, Berkeley
- Awarded “Best Structures Paper” for paper presented at the BCRI2012 conference in Dublin, Ireland
- Awarded “University Scholar Prize” in 2007 and 2008 by the University of Galway in recognition of academic excellence during undergraduate studies

Research Projects

Research Project Coordination

- **Progetto Dipartimento di Eccellenza 2023-2027** Jan 2023 – Dec 2027

Webpage: www.iusspavia.it/it/ricerca/dipartimento-di-eccellenza-2023-2027

Role: Deputy Coordinator (Line R1)

Budget: €6,650,000

Funding: Italian Ministry of University and Research (MUR)

Description: The development of a risk-based approach for the sustainable design of structures and infrastructures with particular regard to those of protection from natural disasters and the sustainable development of the nation.
- **ERIES: Engineering Research Infrastructures for European Synergies** Jun 2022 – May 2026

Webpage: www.eries.eu

Role: Deputy Project Coordinator

Budget: €11,616,118.24

Funding: European Union Horizon Europe

Description: ERIES provides transnational access to advanced experimental facilities in the fields of structural, seismic, wind and geotechnical engineering, with new and unique infrastructures available for the first time. It allows users to advance frontier knowledge and conduct curiosity-driven research towards the reduction of losses and disruption due to these hazards, the management of their associated risk, and the development of innovative solutions to address them that will contribute to a greener and more sustainable society. The project comprises 13 partners from 8 different countries across Europe and North America, including: IUSS Pavia (Italy, Coordinator), Eucentre Foundation (Italy); University of Patras (Greece); Aristotle University of Thessaloniki (Greece); Laboratório Nacional de Engenharia Civil (LNEC), Lisbon (Portugal); Centre de recherche (CEA) Paris-Saclay (France); University of Bristol (United Kingdom); Institute of Earthquake Engineering and Engineering Seismology (IZIIS) Skopje (N. Macedonia); University of Genova (Italy); Western University (Canada); Eindhoven University of Technology (TU/e), Eindhoven (Netherlands); Centre Scientifique et Technique du Bâtiment (CSTB) Nantes (France); European Laboratory for Structural Assessment at the Joint Research Centre (JRC), Ispra (Italy).
- **ROSSINI: Progettazione, realizzazione e sperimentazione di un sistema prototipale di navigazione risk-aware per la gestione e mitigazione del Rischio Sismico in industrie a rischio di Incidente rilevante** Jun 2020 – Nov 2022

Webpage: www.progetto-rossini.it

Role: Principal Investigator and Coordinator

Budget: €333,300

Funding: Italian National Institute for Insurance against Accidents at Work (INAIL)

Description: ROSSINI placed itself within the overall field of seismic risk-aware navigation systems. It used of a sensor array in tandem with a customisable library of fragility functions and numerical models for the integrated risk-aware navigation in industrial plants at risk of NaTech accidents, using an industrial plant facility in Italy as its pilot study. The integration of structural and environmental risks estimated and measured in different ways via a sensor array network was presented as part of an integrated risk identification and evaluation (RIE) online module. This module was used to combine and map the possible risks spatially within an industrial plant's

layout and shown how this information can then be used to not only compute the safest path to safety for a worker located within such a plant but also how mobile communications can be used to aid and guide them in different scenarios.

- **Progetto Dipartimento di Eccellenza 2018-2022** Jan 2019 – Jun 2022

Webpage: www.iusspavia.it/it/ricerca/dipartimento-di-eccellenza-2018-2022

Role: Deputy Coordinator (Line 3)

Budget: €8,205,100

Funding: Italian Ministry of University and Research (MUR)

Description: The research activities associated with Line 3 envisaged a complete review of available seismic design and assessment methods currently employed. It focussed on issues related to problems with current code-based approaches and aimed to incorporate avant-garde approaches such as risk-targeted and loss-driven approaches in order to promote and more optimal use of available resources in the future with the overall goal of reducing seismic risk.

- **INFRA-NAT – Increased Resilience of Critical Infrastructure under Natural and Human-induced Hazard** Jan 2018 – Dec 2019

Webpage: www.infra-nat.eu

Role: Deputy Coordinator and Research Collaborator

Budget: €762,839.05

Funding: European Union Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG-ECHO)

Description: The objective of the INFRA-NAT project was to assess the seismic vulnerability of roadway networks taking into account ageing and deterioration effects of their bridge structures. It focussed on the collection of structure data in Italy, Israel and North Macedonia with the aim of engaging local practitioners and authorities to encourage the adoption of such assessment and prioritisation methodologies.

Research Project Collaboration

- **ERIES-PASFIT: Long-Term Performance Assessment of Base Isolated Buildings through Field Testing** Jan 2024 – Dec 2024

Role: Research Collaborator & Task Coordinator

Funding: ERIES Transnational Access Joint Research Funding Mechanism

Description: ERIES- PASFIT will conduct full-scale in-situ testing of buildings, base isolated via laminated rubber bearings and friction pendulum (FP) systems that have been in service for approximately 15 years. The results of these field tests will be the first of their kind, and will be used to fill important research gaps pertaining to the characterisation of the response and performance of base isolated buildings, including aspects of system-level response in conjunction with ageing, deterioration and, more generally, variability of the mechanical properties of the isolation devices. Thus, this will have important implications on base isolation design, assessment and modelling strategies.

- **ERIES-RACKSLIDE: Content sliding investigations for pallet racking systems** Jan 2024 – Dec 2024

Role: Research Collaborator & Task Coordinator

Funding: ERIES Transnational Access Joint Research Funding Mechanism

Description: Racking systems form the backbone of modern logistics and goods supply chains, lying at the core of every physical product route from manufacturer to consumer. Rack-supported and rack-containing warehouses come in various shapes and sizes, universally constructed from cold-formed steel frames that range from 4m to more than 25m of height. The vast majority stores palletized goods that stay put only by the force of gravity and friction. This is a potentially vulnerable situation that has been severely tested by recent earthquakes, resulting in disruptions of operation and some spectacular collapses. Presently, there are evident gaps in the slide-proof design of racking systems and even in their sliding assessment, both at the professional and the academic level. ERIES-RACKSLIDE brings together 7 universities, one association of manufacturers, and 5 supporting industrial partners with active interest in researching pallet sliding, and proposing the usage of the 9DLAB facility to conduct innovative investigations that will form the state-of-art in content- structure-sliding interaction and inform the future of EN16681, the seismic rack-design standard.

- **ERIES-SUPREME: Seismic oUt-of-Plane REsponse of Masonry gableS** Jan 2024 – Dec 2024

Role: Research Collaborator & Task Coordinator

Funding: ERIES Transnational Access Joint Research Funding Mechanism

Description: Low-rise masonry buildings in Europe often have unreinforced masonry walls and masonry gables supporting pitched roofs. These buildings are common in seismic-prone areas and are particularly vulnerable to earthquakes. The masonry gables are especially susceptible due to their poor connections to the roof structure, positioning at the top of the building, and interaction with flexible roof diaphragms. However, there is limited experimental data on the seismic performance of these gables. This project aims to improve understanding by conducting experiments with easily replicable conditions for numerical simulations. The data will be used to refine existing models and develop new tools for assessing gable performance. A blind-prediction contest will be held to encourage calibration, and the results will be published in a peer-reviewed journal to improve assessment guidelines.

- **ERIES-ENFRAG: ENhancing state-dependent FRAGility through experimentally validated Energy-Based Approaches** May 2023 – Jul 2024

Role: Research Collaborator & Task Coordinator

Funding: ERIES Transnational Access Joint Research Funding Mechanism

Description: ERIES-ENFRAG advances state-dependent earthquake fragility assessment methodologies. The project focuses on masonry infill walls experiencing cumulative states of damage due to combinations of in- plane (IP) and out-of-plane (OOP) actions, commonly quantified through two different peak-based engineering demand parameters (EDPs). ERIES-ENFRAG explores the experimental validation of hysteretic energy-based fragility assessment approaches, which are: 1) currently based only on analytical and/or numerical validations; 2) only considering one type of action/damage mechanism. ERIES-ENFRAG will pave the way for similar cumulative-damage tests for different structures/structural components while providing experimental data on the IP and OOP response of masonry infills. ERIES-ENFRAG aims at a robust consideration of damage-accumulation, particularly relevant in mainshock-aftershock conditions, and will also shed further light on the appropriateness of IP and OOP loading protocols used in experimental testing.

- **ERIES-RESTORING: RETrofitting of STOne masonRy using INno-vative Grid- based composites** May 2023 – Jul 2024

Role: Research Collaborator & Task Coordinator

Funding: ERIES Transnational Access Joint Research Funding Mechanism

Description: The seismic retrofitting of existing masonry buildings has become a priority in seismically prone countries with significant cultural heritage. The proposed project aims to research the effectiveness of Composite Reinforced Mortars (CRM) in strengthening rubble stone masonry buildings. Full-scale tests will be conducted on piers with CRM applied to assess their behavior compared to non-retrofitted piers. The project will also investigate different aspect ratios and load rates. The data collected will contribute to future design guidelines for CRM as a strengthening solution, reducing vulnerability and losses after earthquakes.

- **Progetto DPC/ReLUI5 2019-2021: WP5.1: Assessment of inte-grated seismic retrofitting schemes for buildings** Jan 2020 – Jan 2022

Role: Research Collaborator

Budget: €75,000

Funding: Italian Civil Protection Department

- **Progetto DPC/ReLUI5 2019-2021: WP5.4: Rapid, low impact and integrated retrofitting schemes for bridges** Jan 2019 - Jan 2022

Role: Task Coordinator and Collaborator

Budget: €75,000

Funding: Italian Civil Protection Department

- **Investigation of Seismic Deformation Demand, Capacity and Control in a Novel Self-Centring Steel Braced Frame** Jan 2019 – Jun 2021

Role: Research Collaborator

Description: SERA: Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe (EU Horizon 2020)

- **Joint Research: Comparison in Performance of Base-Isolated Structures between Japan and Italy @ Kabori Research Complex** Nov 2019 – Dec 2019
 - Role:* Lead Researcher
 - Budget:* €6,850 (822,000 JPY)
 - Funding:* Kabori Research Complex, Tokyo, Japan
- **ReLUIS/DPC Line 7: Displacement-based seismic loss assessment** May 2016 – Dec 2018
 - Role:* Lead Researcher
 - Budget:* €475,250.00
 - Funding:* Italian Civil Protection Department
- **Progetto Scuole** May 2015 – Dec 2016
 - Role:* Lead Researcher
 - Budget:* €1,500,000
 - Funding:* Centro Geomorfologia Integrata Per L'Area Del Mediterraneo
- **DiSTEEL: Displacement-Based Seismic Design of Steel Moment Resisting Frame Structures** Feb 2014 – May 2014
 - Role:* Researcher Collaborator
 - Funding:* European Commission Research Fund of Coal and Steel
- **BRACED: Improved European design and assessment methods for concentrically-braced frames** Sep 2012 - Aug 2013
 - Role:* Researcher Collaborator
 - Funding:* SERIES: Seismic Engineering Research Infrastructures for European Synergies (European Commission FP7)

People

Postdoctoral Researchers

1. Volkan Ozsarac

Topic: Impacts of input and energy dissipation in the seismic behaviour of the built environment

Period: Jun 2024 - present

2. Davit Shahnazaryan

Topic: Design, realisation and experimentation of a risk-aware navigational prototype for the management and mitigation of seismic risk in NaTech industrial plants

Period: Oct 2021 - present

PhD Students

1. Serkan Hasanoglu

Topic: Development of tools and services for the advanced assessment of existing construction typologies in Europe

Period: Oct 2022 - Oct 2026 (expected)

Role: Principal advisor

2. Jose Poveda

Topic: Development of PBEE-based design, assessment and risk classification methods, with possible experimental testing of innovative and sustainable solutions for existing structures in South America

Period: Oct 2022 - Oct 2026 (expected)

Role: Principal advisor

3. Savvinos Aristeidou

Topic: Risk-based seismic assessment of bridge structures

Period: Oct 2020 - Oct 2024 (expected)

Role: Principal advisor (Co-advisor: Karim Tarbali)

4. Al Mouayad Bellah Nafeh

Topic: Advancements in Risk- and Loss-Based Methodologies for Large-Scale Assessment of Non-Ductile Infilled Reinforced Concrete Buildings [\[PDF\]](#)

Period: Oct 2019 - Oct 2023 (expected)

Role: Principal advisor

5. Andres Abarca Jimenez

Title: Regional Seismic Risk Assessment for Integrated Loss-Based Prioritisation of Bridge Portfolios [\[PDF\]](#)

Period: Sept 2017 - Apr 2022

Role: Co-advisor (Principal advisor: Ricardo Monteiro)

6. Davit Shahnazaryan

Title: Integrated Performance-Based Seismic Design: Traversing Affordances for Practical Implementation [\[PDF\]](#)

Period: Sept 2017 - Nov 2021

Role: Principal advisor (Co-advisor: Ricardo Monteiro)

MSc Students

1. Tomas Mejia Saldarriaga

Period: Feb 2024 – Oct 2024

Role: Principal advisor

2. Eyal Shalev

Period: Feb 2024 – Oct 2024

Role: Principal advisor

3. Letizia Palamara

Title: Italian guidelines for the risk classification and management of existing bridges: a case study implementation and evaluation [\[PDF\]](#)

Period: Feb 2021 – Oct 2021

Role: Co-advisor (Principal advisor: Gian Michele Calvi)

4. Federico Damiani

Title: Seismic design and loss assessment of base-isolated structures using a PBEE framework [\[PDF\]](#)

Period: Feb 2020 – Dec 2020

Role: Co-advisor (Principal advisor: Ricardo Monteiro)

5. Savvinos Aristeidou

Title: A Performance-Based Assessment of a Case Study Bridge and Impact of Retrofitting Interventions [\[PDF\]](#)

Period: Feb 2020 – Sept 2020

Role: Co-advisor (Principal advisor: Gian Michele Calvi)

6. Carlos Andres Mora Castrillo

Title: Risk-Consistency of Force-Based and Displacement-Based Design of Reinforced Concrete Moment Frames [[PDF](#)]

Period: Sept 2018 – Feb 2019

Role: Co-advisor (Principal advisor: Ricardo Monteiro)

7. Onur Deniz Akan

Title: Displaced Shapes of Infilled RC Frames for Displacement-Based Design and Assessment [[PDF](#)]

Period: Sept 2018 – Mar 2019

Role: Co-advisor (Principal advisor: Ricardo Monteiro)

8. Jose Rafael Leone Villalba

Title: Evaluation of Risk-Consistency of Force-Based and Displacement-Based Design of RC Wall Buildings [[PDF](#)]

Period: Sept 2018 – Feb 2019

Role: Co-advisor (Principal advisor: Ricardo Monteiro)

9. Wilson Carofilis

Title: Seismic Assessment and Retrofit of an Existing Reinforced Concrete School Building in Italy [[PDF](#)]

Period: Sept 2017 – Feb 2018

Role: Principal advisor (Co-advisors: Andre Filiatrault, Daniele Perrone, Ricardo Monteiro)

Synergistic Activities

Peer Review

- Peer reviewer for the following funding bodies:
 - Swiss National Science Foundation
 - Italian Ministry of Universities and Research (PRIN2020: Research Projects of Significant National Interest)
- Peer reviewer for the following international journal publications:
 - Earthquake Engineering & Structural Dynamics
 - Bulletin of Earthquake Engineering
 - Journal of Earthquake Engineering
 - ASCE Journal of Structural Engineering
 - Engineering Structures
 - Earthquake Spectra
 - Soil Dynamics & Earthquake Engineering
 - Earthquake Engineering & Engineering Vibrations
 - Journal of Building Engineering
 - Sustainable Cities & Society
 - Structures
 - International Journal of Disaster Risk Reduction
 - The Structural Design of Tall & Special Buildings
 - ASCE Journal of Performance of Constructed Facilities
 - Journal of Structural Integrity & Maintenance
 - Advances in Structural Engineering
 - Steel & Composites
 - Structural Engineering & Mechanics, An International Journal
 - Earthquakes & Structures
 - Reliability Engineering & System Safety
 - Nature Communications
- Conference organising committee member for:
 - World Conference on Earthquake Engineering, Milan, 2024

Keynote and Invited Lectures

- Invited lecture on “Quantifying fragility functions for non-ductile infilled reinforced concrete buildings from past earthquakes: analytical models versus empirical data” at the 3rd Structural Engineering Workshop by the University of Palermo, Italy July 2024
- Keynote lecture on “European Research Synergies Towards Loss and Risk-Driven Mitigation Approaches” at the [20th International Symposium of the Macedonian Association of Structural Engineers](#) from 28-29 September 2023 in Skopje, North Macedonia September 2023
- Invited lecture on “Myths and fallacies in performance-based earthquake engineering: Ode to Nigel” at the 49th Risk, Hazard and Uncertainty Workshop in Hydra, Greece June 2023
- Invited lecture on “Valutazione e gestione del rischio NaTech negli stabilimenti PIR” at the symposium organised by INAIL in Rome, Italy on the topic of “La ricerca nel campo della gestione del rischio NaTech da sisma” May 2023
- Invited webinar to the [2nd RICH Europe Webinar on Transnational and Virtual Access Opportunities](#) on the topic of “ERIES – Engineering Research Infrastructures for European Synergies” April 2023
- Invited webinar webinar to the [Italian Association for Wind Engineering Young \(ANIV - Associazione Nazionale per Ingegneria del Vento - Giovani\)](#) on the topic of “ERIES research infrastructure network: how to apply for transnational access grants” November 2022
- Invited talk on “Developments in performance-based seismic design and assessment: an Italian perspective” at the University of Canterbury, New Zealand October 2019

Professional Memberships and Qualifications

- Member of the [European Geosciences Union](#) (EGU) 2023 – present
- Approved by the Italian Ministry of Universities and Research’s National Scientific Committee as qualified to hold the rank of Associate Professor in Structural and Geotechnical Engineering 2022 - 2031
- Member of the [Earthquake Engineering Research Institute](#) (EERI) 2022 – present

Coordination and Editorial Roles

- Deputy Director of the Centre for Training and Research on Reduction of Seismic Risk (ROSE Centre) at [IUSS Pavia](#), Italy, organising regular online seminars available on [YouTube](#) and maintaining a constant social media presence on [LinkedIn](#) to disseminate the research centre’s activities 2020 - present
- Member of the Editorial Board of Geohazards and Georisks for the journal *Frontiers in Earth Science* 2020 – present
- Member of the Editorial Board of Earthquake Engineering for the journal *Frontiers in Built Environment* 2020 – present

International Conference Participation

- WCEE2024 - 18th World Conference on Earthquake Engineering, Milan, Italy 2024
 - Organising committee member
 - Organiser and chairman for the following technical sessions:
 - * Economic loss in seismic areas: from empirical data to prescriptive guidance for mitigation
 - * ERIES: Advancing frontier knowledge in earthquake engineering through laboratory testing
 - * Characterizing seismic input for engineering applications

- SECED 2023 Conference - Society for Earthquake and Civil Engineering Dynamics, Cambridge, UK 2023
- MASE - 20th International Symposium of the Macedonian Association of Structural Engineers, Skopje, North Macedonia 2023
 - Keynote speaker
- ICASP14 - 14th International Conference on Applications of Statistics and Probability in Civil Engineering, Dublin, Ireland 2023
 - Chairman for general session on “Novel challenges in performance-based seismic design and seismic performance assessment of structures”
- 49th Risk, Hazard and Uncertainty Workshop, Hydra, Greece 2023
- Earthquake Engineering Research Institute Annual Meeting, San Francisco, USA 2023
- ANIDIS - Associazione Nazionale Italiana di Ingegneria Sismica 2022, Turin, Italy 2022
- 3ECEES - 3rd European Conference on Earthquake Engineering & Seismology, Bucharest, Romania 2022
- ASME 2022 Pressure Vessels & Piping Conference, Las Vegas, USA 2022
- ICONHIC 2022 - 3rd International Conference on Natural Hazards & Infrastructure, Athens, Greece 2022
- 17WCEE - 17th World Conference on Earthquake Engineering, Sendai, Japan 2021
- COMPDYN 2021 - 8th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Athens, Greece 2021
- QuakeCoRE Annual Meeting, Nelson, New Zealand 2019
- ICASP13 - 13th International Conference on Applications of Statistics and Probability in Civil Engineering, Seoul, South Korea 2019
- COMPDYN 2019 - 7th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Hersonissos, Greece 2019
- 4SPONSE - The Fourth International Workshop on Seismic Performance of Non-Structural Elements, Pavia, Italy 2019
- 16ECEE 16th European Conference on Earthquake Engineering, Thessaloniki, Greece 2018
 - Chairman for general session on “Reinforced Concrete Structures IX”
- COMPDYN 2017 - 6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes, Greece 2017
- IMAC-XXXV Conference & Exposition on Structural Dynamics, Orange County, USA 2017
- 16WCEE - 16th World Conference on Earthquake Engineering, Santiago, Chile 2017
 - Chairman for general session on “Seismic Design and Analysis of Reinforced Concrete Buildings”
- COMPDYN 2015 - 5th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Hersonissos, Greece 2015
- 2ICSA - 2nd International Conference on Structures and Architecture, Guimaraes, Portugal 2013
- BCRI2012 - Bridge and Concrete Research in Ireland, Dublin, Ireland 2012
- 15WCEE - 15th World Conference on Earthquake Engineering, Lisbon, Portugal 2012

Languages

Mother tongues	English, Irish (Gaelic)				
Other languages ¹	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
Italian	C2	C2	C2	C2	C1
Spanish	B1	B1	A2	A2	A2
French	A2	A2	A2	A2	A2

Teaching

Academic Year 2024/2025

- **Dynamics of Structures**

Role: Lecturer (22 hours)

Programme: Master Degree in Civil Engineering for Mitigation of Risk from Natural Hazards

Institute: Università di Pavia and IUSS Pavia, Italy

- **Performance-Based Earthquake Engineering**

Role: Lecturer (48 hours)

Programme: Doctoral Course in Earthquake Engineering

Institute: IUSS Pavia, Italy

Academic Year 2023/2024

- **Dynamics of Structures**

Role: Lecturer (22 hours)

Programme: Master Degree in Civil Engineering for Mitigation of Risk from Natural Hazards

Institute: Università di Pavia and IUSS Pavia, Italy

- **Performance-Based Earthquake Engineering**

Role: Lecturer (37 hours)

Programme: Doctoral Course in Earthquake Engineering

Institute: IUSS Pavia, Italy

Academic Year 2022/2023

- **Performance-Based Earthquake Engineering**

Role: Lecturer (37 hours)

Programme: Doctoral Course in Understanding and Managing Extremes

Institute: IUSS Pavia, Italy

Academic Year 2020/2021

- **Laboratorio di Tecnica delle Costruzioni (*in Italian*)**

Role: Lecturer (26 hours)

Programme: Laurea Magistrale in Ingegneria Edile-Architettura

Institute: Università di Pavia, Italy

¹Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user ([Common European Framework of Reference for Languages](#))

Academic Year 2019/2020

- **Fundamentals of Seismic Design**

Role: Guest Lecturer (4 lectures, 12 hours)

Programme: Master Degree in Civil Engineering for Mitigation of Risk from Natural Hazards

Institute: Università di Pavia and IUSS Pavia, Italy

Academic Year 2018/2019

- **Fundamentals of Seismic Design**

Role: Guest Lecturer (4 lectures, 12 hours)

Programme: Master Degree in Civil Engineering for Mitigation of Risk from Natural Hazards

Institute: Università di Pavia and IUSS Pavia, Italy

- **Performance-Based Earthquake Engineering**

Role: Guest Lecturer (1 lecture, 3 hours)

Programme: Master Program of Structural Engineering

Institute: Universidad de las Fuerzas Armadas – ESPE, Ecuador

Academic Year 2017/2018

- **Fundamentals of Seismic Design**

Role: Guest Lecturer (4 lectures, 12 hours)

Programme: Master Degree in Civil Engineering for Mitigation of Risk from Natural Hazards

Institute: Università di Pavia and IUSS Pavia, Italy

Academic Year 2016/2017

- **Seismic Design of Building Structures**

Role: Teaching Assistant

Lecturer: Ricardo Monteiro

Programme: MSc Programme in Civil Engineering

Institute: University of Stellenbosch, South Africa

Academic Year 2013/2014

- **Seismic Design of Steel Structures**

Role: Teaching Assistant

Lecturer: Roberto Leon

Programme: ROSE/MEEES MSc Programme

Institute: Università di Pavia and IUSS Pavia, Italy

Professional Experience

- **Studio Calvi Srl, Pavia, Italy**

Jan 2017 – Mar 2017

Role: Consulting Engineer

Project: Rio Sixaola Bridge

Description: Collaborated on the seismic design and numerical analysis of friction pendulum isolator system of the new bridge to be constructed over Rio Sixaola in Costa Rica

- **BAM Civil Ltd, Ireland**

Apr 2009 – Aug 2009

Role: Site Engineer

Project: Kilonan Harbour Development

Description: Worked as site engineer on new harbour development in west of Ireland to provide new breakwater and landing berths for ships and ferries

• **McInerney Homes Ltd, Ireland**

May 2007 – Aug 2007

Role: Site Engineer

Project: Doughiska Residential Housing Development

Description: Summer internship that involved basic surveying and coordination of site operations

Publications

Journal Papers

- [1] G. J. O'Reilly and D. Shahnazaryan, "On the utility of story loss functions for regional seismic vulnerability modeling and risk assessment," *Earthquake Spectra*, Apr. 2024, ISSN: 8755-2930. DOI: [10.1177/87552930241245940](https://doi.org/10.1177/87552930241245940). [Online]. Available: <https://journals.sagepub.com/doi/10.1177/87552930241245940>.
- [2] D. Shahnazaryan and G. J. O'Reilly, "Appraising the Risk Assessment of Non-Structural Components via Simplified and Machine-Learning-Based Approaches," *Journal of Earthquake Engineering*, pp. 1–24, Feb. 2024, ISSN: 1363-2469. DOI: [10.1080/13632469.2024.2314169](https://doi.org/10.1080/13632469.2024.2314169). [Online]. Available: <https://www.tandfonline.com/doi/full/10.1080/13632469.2024.2314169>.
- [3] S. Aristeidou and G. J. O'Reilly, "Exploring the Use of Orientation-Independent Inelastic Spectral Displacements in the Seismic Assessment of Bridges," *Journal of Earthquake Engineering*, pp. 1–24, Apr. 2024, ISSN: 1363-2469. DOI: [10.1080/13632469.2024.2343067](https://doi.org/10.1080/13632469.2024.2343067). [Online]. Available: <https://www.tandfonline.com/doi/full/10.1080/13632469.2024.2343067>.
- [4] S. Aristeidou, K. Tarbali, and G. J. O'Reilly, "A ground motion model for orientation-independent inelastic spectral displacements from shallow crustal earthquakes," *Earthquake Spectra*, Jun. 2023. DOI: [10.1177/87552930231180228](https://doi.org/10.1177/87552930231180228). [Online]. Available: <https://doi.org/10.1177/87552930231180228>.
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Place and date

Gerard J. O'Reilly

Pavia, Monday 22nd July, 2024

Con la trasmissione del CV, ci autorizza a procedere a nome suo, dichiara implicitamente di aver letto l'informativa completa e acconsente alla pubblicazione del CV nel rispetto dei principi sul trattamento dei dati personali del Regolamento (UE) 2016/679 primo fra tutti quello di finalità.