

SHORT CV

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Fulvio Parisi received his Ph.D. in Seismic Risk in 2011 from University of Naples Federico II, Italy, with a thesis dissertation entitled “*Non-Linear Seismic Analysis of Masonry Buildings*”. Since 2013, he is Assistant Professor of Structural Engineering at University of Naples Federico II. Since 2016, he is Associate Researcher of the Italian National Research Council (CNR). On March 31, 2017, he received the Italian national scientific qualification as Associate Professor of Structural Engineering (youngest recipient). Since 2018, he is expert reviewer of national research projects funded by the Italian Ministry for Education, University and Research (MIUR).

He mainly carries out theoretical and experimental studies in the following research fields:

- earthquake engineering;
- masonry structures;
- safety and protection of cultural heritage;
- structural robustness to extreme hazards;
- risk of structures and infrastructures to natural and man-made hazards;
- resilience of urban systems.

He was involved in several research programmes as research unit coordinator or member, such as: ReLUIS-DPC 2005–2008, ReLUIS-DPC 2010–2013 and ReLUIS-DPC 2014–2018, funded by the Italian Civil Protection Department; PON PROVACI 2011–2015 (Technologies for earthquake protection and valorisation of cultural heritage sites), PON STRIT 2012–2015 (Tools and Technologies for Risk Management of Transportation Infrastructures), and PON METRICS 2013–2017 (Methodologies and Technologies for Management and Requalification of Historical Centres and Heritage Buildings), all funded by MIUR; ReLUIS-MIBACT agreement ARCUS “Seismic assessment of national museums”, funded by the Italian Ministry for Cultural Heritage and Tourism; and CRP-48693 2015–2016 (Design and retrofit of stone and adobe masonry buildings in low-seismicity regions including Sardinia, Italy) funded by Sardinia Region.

He authored more than 100 papers published in peer-reviewed international journals and conference proceedings, several book chapters, many scientific reports, and four computer tools for seismic analysis of masonry buildings and experimental data selection of masonry properties. In 2019, he authored a book entitled “Teoria e Tecnica delle Strutture in Muratura”, Hoepli, Milan (in Italian). He also edited a book and two journal special issues. His research outcomes were awarded by Macedonian Association for Earthquake Engineering, ASCE Journal of Performance of Constructed Facilities, Advances in Engineering, Engineering Failure Analysis (Elsevier), and Engineering Structures (Elsevier). Some of his research advances were implemented in the following guidelines: ACI 549.4R-13 “Guide to Design and Construction of Externally Bonded Fabric-Reinforced Cementitious Matrix (FRCM) Systems for Repair and Strengthening Concrete and Masonry

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Structures” (2013) published by the American Concrete Institute (ACI); CNR-DT 2014/2018 “Istruzioni per la valutazione della robustezza delle costruzioni” and CNR-DT 2015/2018 “Istruzioni per la Progettazione, l’Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l’utilizzo di Compositi Fibrorinforzati a matrice inorganica”, both published by CNR.

He gave several invited lectures in universities and research centres in Europe and USA. He is currently supervisor of four PhD students at University of Naples Federico II and University of Leeds (UK). He was also supervisor of numerous graduate and post-graduate students at University of Naples Federico II, Polytechnic of Milan, and University College London. He teaches “Diagnosis and Therapy of Structural Failures” and “Design and Retrofit of Masonry Structures” at University of Naples Federico II, where he is also scientific board member and teacher of “Failures and Collapses” in the post-graduate MSc Programme in Forensic Engineering. In 2016, he was teacher of “Performance-Based Earthquake Engineering of Masonry Buildings” in the Doctoral Programme in Structural, Geotechnical and Seismic Risk Engineering at University of Naples Federico II.

He serves as Associate Editor of the following international journals: ASCE Journal of Performance of Constructed Facilities; Advances in Civil Engineering; Frontiers in Earth Science - Geohazards and Georisks. He is editorial board member of the following international journals: International Journal of Masonry Research and Innovation; International Journal of Forensic Engineering. He is referee for more than 40 international journals and Encyclopaedia of Earthquake Engineering (Springer). He was scientific committee member, mini-symposium organizer and reviewer for several international conferences.

Presently, he is a task group coordinator or a working group member for the European Association for Earthquake Engineering (EAE), Fédération Internationale du Béton (fib), CNR, and Italian Network of Earthquake Engineering University Laboratories (ReLUIS). He is a member of fib, UNI (Italian National Standards Body), Comité Européen de Normalisation (CEN), Italian National Association for Earthquake Engineering (ANIDIS), ASCE Forensic Engineering Division (FED), Board of Directors of the Italian Association of Forensic Engineering (AIF), Interuniversity Centre for Computational Mechanics and Advanced Materials (MeCMA, Naples and Pavia, Italy), and Institute for Risk & Disaster Reduction (IRDR, London, UK). He is a member of the Board of Directors and Regional Coordinator of the Complex Systems Society - Italian Regional Chapter on Complex Systems.

In 2019, he co-founded a new spin-off company of University of Naples Federico II named FORENSICS s.r.l., which has been established in Naples, Italy. FORENSICS aims at providing Forensic Engineering services for back-analysis and prevention of losses due to natural and man-made events. Primary services of FORENSICS include advanced simulation, monitoring and software development for forensic analysis in the following fields: civil and structural engineering; fire, explosion and chemical environmental engineering; and acoustic engineering.

Selected publications in JCR-indexed international journals

- [1] **Parisi F.**, Scalvenzi M., Brunesi E. (2019). *Performance limit states for progressive collapse analysis of reinforced concrete framed buildings*. Structural Concrete, 20(1):68-84.
- [2] Russo P., De Marco A., **Parisi F.** (2019). *Failure of reinforced concrete and tuff stone masonry buildings as consequence of hydrogen pipeline explosions*. International Journal of Hydrogen Energy, DOI: 10.1016/j.ijhydene.2019.01.225.
- [3] Adam J., **Parisi F.**, Sagaseta J., Lu X. (2018). *Research and practice on progressive collapse and robustness of building structures in the 21st century*. Engineering Structures, 173:122-149.

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- [4] Brunesi E., **Parisi F.** (2017). *Progressive collapse fragility models of European reinforced concrete framed buildings based on pushdown analysis*. *Engineering Structures*, 152:579-596.
- [5] **Parisi F.**, Augenti N. (2017). *Structural failure investigations through probabilistic nonlinear finite element analysis: Methodology and application*. *Engineering Failure Analysis*, 80:386-402.
- [6] Bozza A., Asprone D., **Parisi F.**, Manfredi G. (2017). *Alternative resilience indices for city ecosystems subjected to natural hazards*. *Computer-Aided Civil and Infrastructure Engineering*, 32(7):527-545.
- [7] De Biagi V., **Parisi F.**, Asprone D., Chiaia B., Manfredi G. (2017). *Collapse resistance assessment through the implementation of progressive damage in finite element codes*. *Engineering Structures*, 136:523-534.
- [8] **Parisi F.**, Sabella G. (2017). *Flow-type landslide fragility of reinforced concrete framed buildings*. *Engineering Structures*, 131:28-43.
- [9] **Parisi F.**, Balestrieri C., Asprone D. (2016). *Blast resistance of tuff stone masonry walls*. *Engineering Structures*, 113:233-244.
- [10] **Parisi F.**, Sabella G., Augenti N. (2016). *Constitutive model selection for URM cross sections based on best-fit analytical moment–curvature diagrams*. *Engineering Structures*, 111:451-466.
- [11] Russo P., **Parisi F.** (2016). *Risk-targeted safety distance of reinforced concrete buildings from natural-gas transmission pipelines*. *Reliability Engineering and System Safety*, 148:57-66.
- [12] **Parisi F.**, Balestrieri C., Asprone D. (2016). *Nonlinear micromechanical model for tuff stone masonry: Experimental validation and performance limit states*. *Construction and Building Materials*, 105:165-175.
- [13] Brunesi E., Nascimbene R., **Parisi F.**, Augenti N. (2015). *Progressive collapse fragility of reinforced concrete framed structures through incremental dynamic analysis*. *Engineering Structures*, 104:65-79.
- [14] **Parisi F.** (2015). *Blast fragility and performance-based pressure–impulse diagrams of European reinforced concrete columns*. *Engineering Structures*, 103:285-297.
- [15] **Parisi F.**, Asprone D., Fenu L., Prota A. (2015). *Experimental characterization of Italian composite adobe bricks reinforced with straw fibers*. *Composite Structures*, 122:300-307.
- [16] Caporale A., **Parisi F.**, Asprone D., Luciano R., Prota A. (2015). *Comparative micromechanical assessment of adobe and clay brick masonry assemblages based on experimental data sets*. *Composite Structures*, 120:208-220.
- [17] **Parisi F.**, Augenti N., Prota A. (2014). *Implications of the spandrel type on the lateral behavior of unreinforced masonry walls*. *Earthquake Engineering and Structural Dynamics*, 43(12):1867-1887.
- [18] Caporale A., **Parisi F.**, Asprone D., Luciano R., Prota A. (2014). *Micromechanical analysis of adobe masonry as two-component composite: Influence of bond and loading schemes*. *Composite Structures*, 112:254-263.
- [19] Caporale A., **Parisi F.**, Asprone D., Luciano R., Prota A. (2014). *Critical surfaces for adobe masonry: micromechanical approach*. *Composites Part B: Engineering*, 56:790-796.
- [20] **Parisi F.**, Augenti N. (2013). *Earthquake damages to cultural heritage constructions and simplified assessment of artworks*. *Engineering Failure Analysis*, 34:735-760.

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[one of the most cited papers in Engineering Failure Analysis since 2012]

- [21] **Parisi F.**, Augenti N. (2013). *Forensic engineering in Italy: A reality*. Journal of Performance of Constructed Facilities, 27(5):498-499.
- [22] **Parisi F.**, Lignola G.P., Augenti N., Prota A., Manfredi G. (2013). *Rocking response assessment of in-plane laterally-loaded masonry walls with openings*. Engineering Structures, 56:1234-1248.
- [23] **Parisi F.**, Augenti N. (2013). *Assessment of unreinforced masonry cross sections under eccentric compression accounting for strain softening*. Construction and Building Materials, 41:654-664.
- [24] **Parisi F.**, Augenti N. (2013). *Seismic capacity of irregular unreinforced masonry walls with openings*. Earthquake Engineering and Structural Dynamics, 42(1):101-121.
- [25] Augenti N., **Parisi F.** (2013). *Buckling analysis of a long-span roof structure collapsed during construction*. Journal of Performance of Constructed Facilities, 27(1):1-12.
- [26] **Parisi F.**, Iovinella I., Balsamo A., Augenti N., Prota A. (2013). *In-plane behaviour of tuff masonry strengthened with inorganic matrix-grid composites*. Composites Part B: Engineering, 45(1):1657-1666.
- [27] **Parisi F.**, Augenti N. (2012). *Influence of seismic design criteria on blast resistance of RC framed buildings: A case study*. Engineering Structures, 44:78-93.
- [28] **Parisi F.**, Lignola G.P., Augenti N., Prota A., Manfredi G. (2011). *Nonlinear behavior of a masonry sub-assembly before and after strengthening with inorganic matrix-grid composites*. Journal of Composites for Construction, 15(5):821-832.
- [29] Augenti N., **Parisi F.**, Prota A., Manfredi G. (2011). *In-plane lateral response of a full-scale masonry sub-assembly with and without an inorganic matrix-grid strengthening system*. Journal of Composites for Construction, 15(4):578-590.
- [30] Augenti N., **Parisi F.** (2011). *Constitutive modelling of tuff masonry in direct shear*. Construction and Building Materials, 25(4):1612-1620.
- [31] Augenti N., **Parisi F.** (2010). *Constitutive models for tuff masonry under uniaxial compression*. Journal of Materials in Civil Engineering, 22(11):1102-1111.
- [32] Augenti N., **Parisi F.** (2010). *Learning from construction failures due to the 2009 L'Aquila, Italy, earthquake*. Journal of Performance of Constructed Facilities, 24(6):536-555.