Guido Magenes, Professor of Structural Engineering

Academic qualifications

- Civil Engineering Laurea Magistralis from the University of Pavia, Italy. Cum Laude (1986)
- Master of Science (MSc) in Structural Engineering, Department of Applied Mechanics and Engineering Sciences, University of California San Diego, United States (1989)
- PhD in Structural Engineering at Politecnico of Milano/University of Pavia consortium, Italy Title of thesis: "Seismic behaviour of brick masonry: strength and failure mechanisms of masonry piers". (1992).

Academic/professional positions held

- 2015-present Professor of Structural Engineering, Department of Civil Engineering and Architecture, University of Pavia, Italy
 - o 2015-2020 Professor, Scuola Universitaria Superiore, IUSS Pavia, Italy
 - 2000 2015 Associate Professor, Department of Civil Engineering and Architecture (until 2012 Dept. of Structural Mechanics), University of Pavia, Italy
 - o 1995 1999, Assistant Professor, Dept. of Structural Mechanics, University of Pavia
 - 1993 1995, Research Associate, National Group for Protection from Earthquakes, CNR (Italian National Research Council)
- 2015-2020, director of the Doctoral School on Understanding and Managing Extremes of IUSS Pavia.
- 2013-present, member of the European committee CEN/TC250/SC8 "Seismic design" for Eurocode 8 (as liaison member of CEN/TC250/SC6 "Masonry").
- 2011-present: convenor of the Italian CEN/TC250/SC6 national mirror group "Masonry" and Italian delegate to CEN/TC250/SC6 "Masonry" committee.
- 2014-present: member of WG10 "Seismic Aspects of Historical Monument Preservations" of the European Association for Earthquake Engineering.
- 2010-present: member of several Italian structural code national drafting committees.

Research/Academic Activities

Guido Magenes has over 35 years research experience in the area of seismic analysis, design and assessment of structures, including extensive experimental activity. He has authored or coauthored over 250 scientific papers (88 on international indexed journals) in the field of structural engineering, with emphasis on masonry and reinforced concrete structures subjected to seismic and nonseismic loading. His main research interest is the structural behaviour of masonry and reinforced concrete constructions and the relevant strategies and techniques of repair/rehabilitation/strengthening, with particular reference to seismic engineering. He has been responsible of numerous research projects funded by public bodies such as European Commission, MIUR (Ministry of University and Research), MAE (Ministry of Foreign Affairs), CNR (National Research Council), Department of Civil Protection, Regional Authorities, and many industrial partners (national and international). For his contributions in the field of the seismic behavior of masonry structures he has been invited as a keynote speaker to several international conferences. He is a co-author of the nonlinear analysis software SAM II for the seismic analysis of masonry structures, also implemented in professional codes (ANDILWall, PRO_SAM).

Selected Recent Papers:

- Manzini C.F., Morandi P., Magenes G. (2023). SAM-II: development and validation of an EF-based program for seismic pushover analysis of masonry buildings. BULLETIN OF EARTHQUAKE ENGINEERING, vol. 21, Issue 14, p. 6317 – 6365, doi: 10.1007/s10518-023-01767-y
- 2. Kouris L. A. S., Penna A., Magenes G. (2022). Assessment of a Full-Scale Unreinforced Stone Masonry Building Tested on a Shaking Table by Inverse Engineering. BUILDINGS, vol. 12, ISSN: 2075-5309, doi: 10.3390/buildings12081235
- **3.** Kallioras S, Graziotti F., Penna A., Magenes G, (2022) Effects of vertical ground motions on the dynamic response of URM structures: Comparative shake-table tests, EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS, 51(2), 347-368
- 4. Morandi P., Hak S., Milanesi R. R., Magenes G. (2022). In-plane/out-of-plane interaction of strong masonry infills: From cyclic tests to out-of-plane verifications. EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS, vol. 51, p. 648-672, ISSN: 0098-8847, doi: 10.1002/eqe.3584
- 5. Morandi, P, Butenweg, C, Breis, K, Beyer, K, Magenes, G (2022). Latest findings on the behaviour factor q for the seismic design of URM buildings. BULLETIN OF EARTHQUAKE ENGINEERING, vol. 20, p. 5797-5848, ISSN: 1570-761X, doi: 10.1007/s10518-022-01419-7
- 6. Cattari S., Calderoni B., Calio I., Camata G., de Miranda S., Magenes G., Milani G., Saetta A. (2022). Nonlinear modeling of the seismic response of masonry structures: critical review and open issues towards engineering practice. BULLETIN OF EARTHQUAKE ENGINEERING, vol. 20, p. 1939-1997, ISSN: 1570-761X, doi: 10.1007/s10518-021-01263-1
- 7. R. R. Milanesi, P. Morandi, C. F. Manzini, L. Albanesi, G. Magenes (2022). Out-of-plane Response of an Innovative Masonry Infill with Sliding Joints from Shaking Table Tests. JOURNAL OF EARTHQUAKE ENGINEERING, vol. 26, p. 1789-1823, ISSN: 1363-2469, doi: 10.1080/13632469.2020.1739173
- 8. Cattari S., Magenes G. (2021). Benchmarking the software packages to model and assess the seismic response of unreinforced masonry existing buildings through nonlinear static analyses. BULLETIN OF EARTHQUAKE ENGINEERING, vol. 20, p. 1901-1936, ISSN: 1570-761X, doi: 10.1007/s10518-021-01078-0
- **9.** Milanesi, RR, Morandi, P, Hak, S, Magenes, G (2021). Experiment-based out-of-plane resistance of strong masonry infills for codified applications. ENGINEERING STRUCTURES, vol. 242, ISSN: 0141-0296, doi: 10.1016/j.engstruct.2021.112525
- 10. Morandi P., Albanesi L., Magenes G. (2021). In-Plane Cyclic Response of New Urm Systems with Thin Web and Shell Clay Units. JOURNAL OF EARTHQUAKE ENGINEERING, vol. 25, p. 1533-1564, ISSN: 1363-2469, doi: 10.1080/13632469.2019.158680
- 11. Sharma S., Tomassetti U., Graziotti F., Magenes G. (2021). Simplified methodologies for assessing the out-of-plane two-way bending seismic response of unreinforced brick masonry walls: lessons from recent experimental studies. STRUCTURES, vol. 33, p. 2839-2854, ISSN: 2352-0124, doi: 10.1016/j.istruc.2021.03.121
- 12. Sharma S., Graziotti F., Magenes G. (2021). Torsional shear strength of unreinforced brick masonry bed joints. CONSTRUCTION AND BUILDING MATERIALS, vol. 275, ISSN: 0950-0618, doi: 10.1016/j.conbuildmat.2020.122053

Scopus Bibliometrics (as of 30 April 2024) - Documents: 141, h-index: 40, Citations: 5661