GABRIELE GUERRINI, Ph.D., P.E.

Post-Doctoral Researcher, Dept. of Civil Engineering and Architecture, University of Pavia

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EDUCATION

- **Ph.D., Structural Engineering,** December 20, 2014
  University of California, San Diego, USA
  Dissertation: *Seismic Performance of Precast Concrete Dual-Shell Steel Columns for Accelerated Bridge Construction*
  Faculty advisor: Prof. José I. Restrepo.
- **M.S., Structural Engineering,** June 11, 2010
  University of California, San Diego, USA
  GPA: 3.975/4.000
  Faculty advisor: Prof. José I. Restrepo.
- **Laurea Magistrale (Graduate Degree), Civil Engineering,** July 25, 2008
  University of Bologna, Italy
  Final grade: 110/110 Summa cum Laude
  Thesis: *Effects of Non-Structural Masonry Walls on the Dynamic Response of a Reinforced Concrete Frame Building*
  Faculty advisor: Prof. Marco Savoia.
- **Laurea (Undergraduate Degree), Civil Engineering,** October 11, 2005
  University of Bologna, Italy
  Final grade: 110/110 Summa cum Laude
  Thesis: *Problems in Structural Health Monitoring Using Fiber Optic Sensors*
  Faculty advisor: Prof. Giovanni Pascale Guidotti Magnani.

RESEARCH INTERESTS

- Performance-based engineering under common and extreme loading scenarios.
- Structural dynamics, earthquake engineering, seismic design and assessment of structures.
- Full-scale and reduced-scale testing of structural components and systems, under monotonic, quasi-static cyclic and dynamic loading.
- Nonlinear numerical modeling and structural analysis.
- Mechanics, design, and modeling of masonry, reinforced concrete, prestressed and post-tensioned concrete, steel, and composite steel-concrete structures.
- Structural retrofit and rehabilitation with innovative and low-impact technologies.
- Development of innovative resilient structural solutions, such as self-centering systems, rocking foundations, seismic isolation, and supplemental energy dissipation.
- Development and application of high-performance cementitious, metallic, and polymeric materials.

RESEARCH EXPERIENCE

- **Post-Doctoral Researcher**, January 2016-present
  Department of Civil Engineering and Architecture, University of Pavia, and EUCENTRE, Italy
  Supervisor: Prof. Andrea Penna.
  - ◊ Dynamic shake-table tests and quasi-static cyclic tests of masonry buildings and sub-assemblages, at full and reduced scale.
  - ◊ Development, modeling, and testing of sustainable seismic retrofit strategies for stone and brick masonry buildings.
  - ◊ Experimental characterization of masonry materials and components.
  - ◊ Performance assessment of masonry structures under tectonic and induced seismicity.
  - ◊ Nonlinear static and time-history analyses of masonry structures.
  - ◊ Evaluation of seismic displacement demands for nonlinear static (pushover) analysis.
  - ◊ Development and testing of an innovative kinematic seismic isolation device.

- **Graduate Student Researcher**, September 2008-August 2014
  Department of Structural Engineering, University of California, San Diego, USA
  Faculty advisor: Prof. José I. Restrepo.
  - ◊ Development of a seismic-resilient low-damage, self-centering technology for post-tensioned precast composite steel-concrete bridge piers, including design guidelines.
  - ◊ Dynamic shake-table tests and quasi-static cyclic tests of conventional reinforced concrete, self-centering, and rocking bridge and building structures, at full and reduced scale.
  - ◊ Experimental characterization of conventional and innovative materials: steel, concrete, mortar, fiber-reinforced mortar, rubber, polyurethane.
  - ◊ Nonlinear static and time-history analyses of conventional reinforced concrete and self-centering structural systems.
  - ◊ Implementation of a displacement-driven nonlinear adaptive pushover algorithm, with consideration of higher-mode effects.
  - ◊ Extent of plasticity in reinforced concrete members including flexure-shear interaction effects.

- **Laurea Magistrale Thesis Research**, March 2008-July 2008
  Department of Civil, Environmental, and Materials Engineering, University of Bologna, Italy
  Faculty advisor: Prof. Marco Savoia.
  - ◊ Investigation of the effect of masonry infills on the dynamic and seismic response of a reinforced concrete frame building, via nonlinear static and time-history analyses.

- **Laurea Thesis Research**, June 2005-October 2005
  Department of Civil, Environmental, and Materials Engineering, University of Bologna, Italy
  Faculty advisor: Prof. Giovanni Pascale Guidotti Magnani.
  - ◊ Laboratory tests with application of fiber optic sensors to fiber-reinforced polymer specimens, including data processing and interpretation.

TEACHING EXPERIENCE

- **Teaching Assistant:** prepared and taught weekly discussion and project sessions as well as occasional lectures; held office and laboratory hours; prepared, solved, and graded homework, term projects, and exams.

  ◊ *Structural Design*
  Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, Prof. A. Penna
  Undergraduate division. Spring 2020, 2019, 2018, 2017, 2016.

  ◊ *Reinforced Concrete Structures*
  Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, Prof. B. Mihaylov
  Graduate division. Fall 2017.

  ◊ *Advanced Seismic Design of Structures*
  Dept. of Structural Engineering, UC San Diego, USA, Prof. J.I. Restrepo
  SE 223, graduate division. Spring 2014, 2013, 2012, 2011, 2010, 2009.

  ◊ *Design of Structural Concrete/Prestressed Concrete*
  Dept. of Structural Engineering, UC San Diego, USA, Prof. P.B. Shing
  SE 151B, undergraduate upper division. Spring 2014 and 2007.

  ◊ *Design of Structural Concrete/Reinforced Concrete*
  Dept. of Structural Engineering, UC San Diego, USA, Prof. J.I. Restrepo
  SE 151A, undergraduate upper division. Winter 2014.

  ◊ *Statistics, Probability and Reliability*
  Dept. of Structural Engineering, UC San Diego, USA, Prof. J.P. Conte
  SE 125, undergraduate upper division. Fall 2013.

  ◊ *Fundamentals of Seismic Design*
  ROSE School, Pavia, Italy, Prof. J.I. Restrepo
  Graduate division. Fall 2009.

  ◊ *Earthquake in Action*
  California State Summer School for Mathematics and Science, UC San Diego, USA, Prof. P.B. Shing and Dr. K. Robinson
  Summer program for high-school students. Summer 2007.

- **Teacher:** prepared and taught lectures; prepared assignments, provided guidance, and graded homework, term projects, laboratory activities, and exams.

  ◊ *Reinforced Concrete Structures*
  Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy,
  Co-instructor with Prof. B. Mihaylov
  Graduate division. Fall 2020.

  ◊ *Laboratory of Structural Engineering*
  Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy
  Co-instructor with Prof. F. Graziotti
  Graduate division. Spring 2020.

  ◊ *Structural Engineering*
  Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy
  Co-instructor with Prof. P. Venini and Dr. Annalisa Rosti
  Graduate division. Fall 2018.

◊ *Earthquake in Action*
California State Summer School for Mathematics and Science, UC San Diego, USA
Co-instructor with Prof. P.B. Shing, Dr. K. Robinson, and Dr. A. Stavridis
Summer program for high-school students. Summer 2009.

MENTORING EXPERIENCE

- **Undergraduate students:** research activity, experimental work, and theses.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2019/2020: Riccardo Cerutti.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2018/2019: Hajar Sif Essalam, Renato Solimena.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2017/2018: Sarah Ballarin, Giuseppe Crisafulli, Luca Franzoni, Alberto Gagliardi.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2016/2017: Alice Airoldi, Andrea Bruggi, Michele Caserini, Donato Iorio, Stefano Minelli.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2015/2016: Marco Termine.
- **Graduate students:** individual studies, research activity, experimental work, and theses.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2019/2020: Alice Airoldi, Andrea Bruggi, Lorenc Cani, Cecilia Noto, Federico Sacchi, Christian Salvatori.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2018/2019: Gian Carlo De Sanctis, Ilaria Nasso, Christian Salvatori, Nicolò Vignati.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2017/2018: Luca Mazzella, Sacha Pellegrini, Camilla Rossi.
  - ◊ Dept. of Civil Engineering and Architecture, Univ. of Pavia, Italy, 2016/2017: Paolo Comini, Francesca Di Santo, Simone Scherini.
  - ◊ Dept. of Structural Engineering, UC San Diego, USA, 2013/2014: Anthony Trgovcich.
  - ◊ Dept. of Structural Engineering, UC San Diego, USA, and Dept. of Civil, Chemical, Environmental, and Materials Engineering, Univ. of Bologna, Italy, 2011/2012: Milena Massari, Athanassios Vervelidis.
  - ◊ Dept. of Structural Engineering, UC San Diego, USA, and Dept. of Civil, Chemical, Environmental, and Materials Engineering, Univ. of Bologna, Italy, 2010/2011: Francesco Carrea.
- **Student competitions:**
  - ◊ Dept. of Structural Engineering, UC San Diego, USA, 2012/2013: EERI Undergraduate Seismic Design Competition Team.

HONORS AND AWARDS

- *Best Presentation Award*, 10th International Conference on Urban Earthquake Engineering, Tokyo Institute of Technology, Japan, March 2013.
- *E.K. Rice and W.C. Bailey Memorial Scholarship*, Post-Tensioning Institute, USA, 2010/2011.
- *Structural Engineering Department Fellowship*, UC San Diego, USA, 2008/2009.
- *Overseas - Education Abroad Program Scholarship*, University of Bologna, Italy, 2006/2007.
- *Arrigo and Anella Focherini Memorial Scholarship*, University of Bologna, Italy, 2004/2005.

INVITED LECTURES, SEMINARS, AND PRESENTATIONS

1. *Seismic Vulnerability Assessment and Mitigation of Existing Masonry Buildings*
   Mapei Croatia, Sveta Nedelja, Croatia
   Workshop, July 28, 2020.
2. *Local Mechanism Analysis in Masonry Structures According to the 2018 Italian Building Code*
   Digital & BIM Italia, Bologna, Italy
   Workshop (in Italian), November 22, 2019.
3. *Experimental Assessment of the Seismic Performance of a Stone Masonry Building Aggregate in Basel*
   Basler Erdbebenkurse, Basel, Switzerland
   Seminar, September 12, 2019.
4. *Existing Masonry Buildings and Retrofit Methods According to the 2018 Italian Building Code*
   P-learning, Brescia, Italy
   E-learning course for professional engineers (in Italian), July 9-10, 2019.
5. *Light Retrofit Solutions and Seismic Isolation Systems*
   EconStruct, Leeuwarden, the Netherlands
   Seminar, May 10, 2019.
6. *Equivalent-Frame Modeling of masonry Buildings: an Effective Approach for Calculation and Interpretation*
   ERGOCAD, Porto Palace Conference Hall, Thessaloniki, Greece
   Workshop, June 22, 2018.
7. *Seismic Performance of Conventional Reinforced Concrete and Low-Damage Bridge Columns*
   Dept. of Civil and Environmental Engineering and Construction, University of Nevada, Las Vegas, USA
   Seminar, March 14, 2016.
8. *Hybrid Rocking Recentering Systems: Application to Columns for Accelerated Bridge Construction*
   San Francisco Public Works, City and County of San Francisco, USA
   Seminar, October 15, 2014.
9. *Seismic Behavior of a Recentering Bridge Column for Accelerated Bridge Construction*
   Dept. of Structural Engineering, University of California, San Diego, USA
   Oral presentation, NEES-REU Orientation, June 20, 2013.
10. *Seismic Design & Performance of Recentering Bridge Columns for Accelerated Bridge Construction*
    Dept. of Civil, Environmental, and Architectural Engineering, University of Kansas, USA
    Seminar, April 15, 2013.

11. *Large Scale Validation of the Seismic Performance of Reinforced Concrete Bridge Columns*
Dept. of Structural Engineering, University of California, San Diego, USA
Invited Lecture, January 29, 2013.

12. *Seismic Performance of Ductile Reinforced Concrete Bridge Piers*
University of the Republic of San Marino and University of Modena and Reggio Emilia, Italy
Seminar, December 21, 2012.

13. *Seismic Response of Recentering Low-Damage Precast Concrete Dual-Shell Steel Columns*
Pacific Earthquake Engineering Research Center, Berkeley, CA, USA
Poster presentation, 2012 PEER Annual Meeting, October 26-27, 2012.

14. *Advanced Precast Concrete Dual-Shell Steel Columns*
Pacific Earthquake Engineering Research Center, Berkeley, CA, USA
Poster presentation, 2011 PEER Annual Meeting, September 30-October 1, 2011.

15. *Large-Scale Validation of Seismic Performance of Bridge Columns*
Network for Earthquake Engineering Simulation and Multi-Disciplinary Center for Earthquake Engineering Research, Buffalo, NY, USA
Poster and oral presentation, 2011 Quake Summit and MCEER Annual Meeting, June 9-11, 2011.

16. *Large-Scale Validation of Seismic Performance of Bridge Columns*
Network for Earthquake Engineering Simulation and Pacific Earthquake Engineering Research Center, San Francisco, CA, USA
Poster presentation, 2010 Quake Summit and PEER Annual Meeting, October 8-9, 2010.

17. *Ductile Behavior of Reinforced Concrete Structures*
Dept. of Civil, Chemical, Environmental, and Materials Engineering, University of Bologna, Italy
Invited Lecture, December 16, 2009 and May 16, 2010.

18. *Advanced Precast Concrete Dual-Shell Steel Columns*
Pacific Earthquake Engineering Research Center, San Francisco, CA, USA
Poster presentation, 2009 PEER Annual Meeting, October 15-16, 2009.

PROFESSIONAL SERVICE

- **Journal Peer Reviewer**, November 2016-present
    - ◊ *ACI Structural Journal*, American Concrete Institute.
    - ◊ *Engineering Structures*, Elsevier.
    - ◊ *Journal of Structural Engineering*, American Society of Civil Engineers.
    - ◊ *Journal of Earthquake Engineering*, Taylor & Francis.
    - ◊ *Structural Concrete*, John Wiley & Sons.
    - ◊ *Structures*, Elsevier.

- **Post-Earthquake Reconnaissance and Assessment**, April 2010-present
    - ◊ Central Italy, after the August 24 and October 30, 2016 main events.
    - ◊ Emilia-Romagna, Italy, after the May 20 and May 29, 2012 main events.
    - ◊ Mexicali, Baja California, Mexico, after the April 04, 2010 main event.

PROFESSIONAL EXPERIENCE

- **Structural Engineer Consultant**, January 2014-present

  ◊ Structural design and analysis of two high-rise buildings located in Tijuana, Baja California, Mexico, including reinforced concrete foundations, steel gravity framing, and reinforced concrete shear-walls.

  ◊ Seismic vulnerability assessment and retrofit of an existing school masonry building, located in the province of Alessandria, Italy. Mitigation of out-of-plane local mechanisms by tie-rods and continuous connections between walls and diaphragms. Structural design and numerical analysis of a new steel emergency staircase.

  ◊ Structural design and numerical analysis (under gravity and seismic loads) of a modified layout for an existing unreinforced masonry building, adapted to residential use, located in the province of Pavia, Italy. Partial replacement of the floor framing with composite steel-concrete deck, strengthening of existing floor diaphragms, and seismic assessment of the modified structure.

  ◊ Peer review of the nonlinear static and dynamic analyses of an existing unreinforced masonry building (Ashleigh Court) located in Wellington, New Zealand.

  ◊ Structural design and numerical analysis (under gravity and seismic loads) of a new 6-story reinforced concrete shear-wall braced building, for commercial and office use in Oakland, CA, USA. Application of a performance-based approach to reduce foundation costs compared to standard code requirements. Structural consulting for the evaluation of proposed modifications during construction phases.

  ◊ Design of the vibration isolation system for a glass showcase at the Whitney Museum in New York, USA.

  ◊ Preliminary analysis and design (under gravity and seismic loads) of a new 2-story timber and steel frame house, in Richmond, CA, USA.

  ◊ Review of the design (under gravity and seismic loads) of a new 34-story steel frame/concrete core building, for garage and medical office use, in Tijuana, Mexico.

- **Junior Engineer and Student Trainee**, September 2014-December 2015
  City and County of San Francisco, San Francisco Public Works, San Francisco, CA

  ◊ Structural design and numerical analysis (under gravity and seismic loads) of a new 3-story steel frame building, with special moment-resisting frames and buckling-restrained braces, for the San Francisco Fire Department (Fire Station 05). Application of a performance-based approach to ensure immediate occupancy even after major seismic events.

  ◊ Preliminary analysis and design (under gravity and seismic loads) of a new warehouse with reinforced concrete shear-walls and steel-frame deck, for garage and mechanical shop use in San Francisco, CA, USA (General Services Administration, Central Shops).

  ◊ Review of the non-linear static analysis and proposed seismic retrofit of an existing 9-story reinforced concrete building dating back to the 1970s, for the San Francisco General Hospital (Building 5).

  ◊ Seismic vulnerability assessment of an existing warehouse with unreinforced masonry walls and steel-frame deck, dating back to the end of 1800/beginning of 1900 (Animal Care & Control, 1401 Bryant Street). Preliminary design of a modified structural layout with new steel frames and seismic retrofit of the existing masonry with shotcrete, adding a new

intermediate floor and adapting the original industrial warehouse to office space and veterinary clinic.

◊ Seismic vulnerability assessment of an existing 2-story building with tilt-up precast concrete walls and timber floors, dating back to the 1960s, for the San Francisco Fire Department (Fire Station 49). Design of the seismic retrofit for the roof timber diaphragm.

◊ Seismic vulnerability assessment of an existing 5-story steel/concrete frame building with stone masonry infills, dating back to the 1910s/1930s, for medical clinic and office use in San Francisco, CA, USA (Department of Public Health Headquarters, 101 Grove Street). Structural survey and preliminary vulnerability assessment.

◊ Seismic vulnerability assessment of an existing reinforced concrete parking structure, dating back to the 1960s and recently upgraded with steel braces, in San Francisco, CA, USA (Ellis O'Farrell Garage). Numerical modeling and linear dynamic analysis.

◊ Visual inspection and performance evaluation of existing bridges and tunnels within the City and County of San Francisco.

PROFESSIONAL AFFILIATIONS

- Board for Professional Engineers, Land Surveyors, and Geologists of California: Engineer-in-Training, 2011-present.
- Board of Engineers, Province of Bologna, Italy: Professional Civil Engineer, 2010-present.
- American Society of Civil Engineers: member, 2010-present.
- Post-Tensioning Institute: member, 2010-present.
- American Institute of Steel Construction: member, 2010-present.
- American Concrete Institute: member, 2009-present.
- Structural Engineers Association of California: member, 2009-2015.

OTHER SKILLS

Computer Skills

- Programming languages and computational packages: Matlab, Tcl, Fortran, Mathematica.
- Computer-aided design: AutoCAD.
- Structural analysis/finite element software packages: OpenSees, Ruaumoko, SAP-2000, ETABS, Midas, Tremuri.
- Other software: Windows O.S., MS Office (Word, Excel, PowerPoint).

Language Skills

- Italian: native proficiency.
- English: excellent proficiency.
- French: basic knowledge.
- Spanish: basic knowledge.

PUBLICATIONS

Peer-Reviewed Journal Publications

1. Miglietta, M., Damiani, N., **Guerrini, G.**, and Graziotti, F., "Full-Scale Shake-Table Tests on Two Unreinforced Masonry Cavity-Wall Buildings: Effect of an Innovative Timber Retrofit". *Bulletin of Earthquake Engineering*, accepted October 2020.
2. **Guerrini, G.**, Damiani, N., Miglietta, M., and Graziotti, F., "Cyclic Response of Masonry Piers Retrofitted with Timber Frames and Boards". *Proceedings of the Institution of Civil Engineers – Structures and Buildings*, February 2020.
3. Senaldi, I., **Guerrini, G.**, Comini, P., Graziotti, F., Penna, A., Beyer, K., and Magenes, G., "Experimental Seismic Performance of a Half‐Scale Stone Masonry Building Aggregate". *Bulletin of Earthquake Engineering*, January 2020.
4. Di Sarno, L., Da Porto, F., **Guerrini, G.**, Calvi, P., Camata, G., and Prota, A., "Seismic Performance of Bridges during the 2016 Central Italy Earthquakes". *Bulletin of Earthquake Engineering*, October 2019.
5. **Guerrini, G.**, Senaldi, I., Graziotti, F., Magenes, G., Beyer, K., and Penna, A., "Shake-Table Test of a Strengthened Stone Masonry Building Aggregate with Flexible Diaphragms". *International Journal of Architectural Heritage*, July 2019.
6. **Guerrini, G.** and Restrepo, J.I., "Extent of Plasticity in Reinforced Concrete Columns". *ACI Structural Journal*, September 2018.
7. Zhang, Z., Fleischman, R., Restrepo, J.I., **Guerrini G.**, Nema, A., Zhang, D., Shakya, U., Tsampras, G., and Sause, R., "Shake Table Test Performance of an Inertial Force-Limiting Floor Anchorage System". *Earthquake Engineering and Structural Dynamics*, August 2018.
8. Kallioras, S., **Guerrini, G.**, Tomassetti, U., Peloso, S., and Graziotti, F., "Dataset from the Dynamic Shake-Table Test of a Full-Scale Unreinforced Clay Masonry Building with Flexible Timber Diaphragms". *Data in Brief*, June 2018.
9. Kallioras, S., **Guerrini, G.**, Tomassetti, U., Marchesi, B., Penna, A., Graziotti, F., and Magenes, G., "Experimental Seismic Performance of a Full-Scale Unreinforced Clay Masonry Building with Flexible Timber Diaphragms". *Engineering Structures*, April 2018.
10. **Guerrini, G.**, Graziotti, F., Penna, A., and Magenes, G., "Improved Evaluation of Inelastic Displacement Demands for Short-Period Masonry Structures". *Earthquake Engineering and Structural Dynamics*, July 2017.
11. **Guerrini, G.**, Restrepo, J.I., Massari, M., and Vervelidis, A., "Seismic Behavior of Posttensioned Self-Centering Precast Concrete Dual-Shell Steel Columns". *ASCE Journal of Structural Engineering*, April 2015.
12. Antonellis, G., Gavras, A.G., Panagiotou, M., Kutter, B.L., **Guerrini, G.**, Sander, A.C., and Fox, P.J., "Shake Table Test of Large-Scale Bridge Columns Supported on Rocking Shallow Foundations". *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, January 2015.

Other Journal Publications

13. Di Sarno, L., da Porto, F., **Guerrini, G.**, and Prota, A., "Analysis of the Structural Response of Some Bridges during the Central Italy Earthquake". *Progettazione Sismica*, 2018.

14. Fragomeli, A., Galasco, A., Graziotti, F., **Guerrini, G.**, Kallioras, S., Magenes, G., Malomo, D., Mandirola, M., Manzini, C.F., Marchesi, B., Milanesi, R.R., Morandi, P., Penna, A., Rossi, A., Rosti, A., Rota, M., Senaldi, I.E., Tomassetti, U., Cattari, S., da Porto, F., and Sorrentino, L., "Performance of Masonry Buildings in the Seismic Sequence of Central Italy 2016 - Part 1: Overview". *Progettazione Sismica*, 2017.

15. Fragomeli, A., Galasco, A., Graziotti, F., **Guerrini, G.**, Kallioras, S., Magenes, G., Malomo, D., Mandirola, M., Manzini, C.F., Marchesi, B., Milanesi, R.R., Morandi, P., Penna, A., Rossi, A., Rosti, A., Rota, M., Senaldi, I.E., Tomassetti, U., Cattari, S., da Porto, F., and Sorrentino, L., "Performance of Masonry Buildings in the Seismic Sequence of Central Italy 2016 - Part 2: Case Studies of Affected Municipalities". *Progettazione Sismica*, 2017.

Book Chapters

16. Senaldi, I., **Guerrini, G.**, Caruso, M., Graziotti, F., Magenes, G., Beyer, K., and Penna, A., "Experimental Seismic Response of a Half-Scale Stone Masonry Building Aggregate: Effects of Retrofit Strategies". In: *Structural Analysis of Historical Constructions - An Interdisciplinary Approach*, R. Aguilar, D. Torrealva, S. Moreira, M.A. Pando, and L.F. Ramos, Eds., RILEM Bookseries 18, Springer International Publishing, Basel, Switzerland, 2019, pp. 1372-1381.

17. Graziotti, F., **Guerrini, G.**, Rossi, A., Andreotti, G., and Magenes, G., "Proposal for an Improved Procedure and Interpretation of ASTM C1531 for the In-Situ Determination of Brick-Masonry Shear Strength". In: *Masonry 2018, ASTM STP1612*, N.V. Krogstad and W.M. McGinley, Eds., ASTM International, West Conshohocken, PA, USA, 2018, pp. 13-33.

18. **Guerrini, G.**, Graziotti, F., Penna, A., and Magenes, G., "Dynamic Shake-Table Tests on Two Full-Scale, Unreinforced Masonry Buildings Subjected to Induced Seismicity". In: *Experimental Vibration Analysis for Civil Structures*, J.P. Conte, R. Astroza, G. Benzoni, G. Feltrin, K.L. Loh, and B. Moaveni, Eds., Springer International Publishing, Basel, Switzerland, 2018, pp. 376-387.

Conference Publications

19. **Guerrini, G.**, Tomassetti, U., Graziotti, F., Rota, M., and Penna, A., "Effect of an Innovative Isolation System on the Seismic Response of Cultural Heritage Building Contents". *Proc. 17th World Conference on Earthquake Engineering*, Sendai, Japan, 2020-2021.

20. Damiani, N., Miglietta, M., **Guerrini, G.**, and Graziotti, F., "Seismic Performance of an Innovative Timber Retrofit Technique for Unreinforced Masonry Buildings". *Proc. 17th World Conference on Earthquake Engineering*, Sendai, Japan, 2020-2021.

21. **Guerrini, G.**, Senaldi, I., Tacci, M., Penna, A., Beyer, K., and Rota, M., "Damage Limit States for Artistic Assets from Cyclic and Dynamic Tests on Plastered Masonry Walls". *Proc. 17th World Conference on Earthquake Engineering*, Sendai, Japan, 2020-2021.

22. Damiani, N., Miglietta, M., **Guerrini, G.**, and Graziotti, F., "An Innovative Timber System for the Seismic Retrofit of Unreinforced Brick Masonry Buildings". *Proc. 17th International Brick and Block Masonry Conference – From Historical to Sustainable Masonry*, Krakow, Poland, July 5-8, 2020.

23. Senaldi, I., **Guerrini, G.**, Bruggi, A., Quaini, M., and Penna, A., "Experimental Characterization of PBO-FRCM Composites for Masonry Structures Retrofit". *Proc. 17th International Brick and Block Masonry Conference – From Historical to Sustainable Masonry*, Krakow, Poland, July 5-8, 2020.

24. **Guerrini, G.**, "Two Critical Issues in Detailing Reinforced Concrete Frames for Ductility". *Proc. Symposium on Concrete and Concrete Structures*, Parma, Italy, October 15, 2019.

25. **Guerrini, G.**, Ausenda, G., Graziotti, F., and Penna, A., "An Innovative Seismic Isolation Device Based on Multiple Articulated Quadrilateral Mechanisms: Analytical Study and Shake-Table Test". *Proc. XVIII Conference of the Italian National Association of Earthquake Engineering*, Ascoli Piceno, Italy, September 15-19, 2019.

26. Graziotti, F., Solenghi, M., **Guerrini, G.**, and Penna, A., "Macroelement Modelling of a Monitored URM School Building Accounting for Seismic Damage Accumulation". *Proc. XVIII Conference of the Italian National Association of Earthquake Engineering*, Ascoli Piceno, Italy, September 15-19, 2019.

27. Senaldi, I., **Guerrini, G.**, Solenghi, M., Graziotti, F., Penna, A., and Beyer, K., "Numerical Modelling of the Seismic Response of a Half-Scale Stone Masonry Aggregate Prototype". *Proc. XVIII Conference of the Italian National Association of Earthquake Engineering*, Ascoli Piceno, Italy, September 15-19, 2019.

28. Miglietta, M., Damiani, N., Grottoli, L., **Guerrini, G.**, and Graziotti, F., "Shake-Table Investigation of a Timber Retrofit Solution for Unreinforced Masonry Cavity-Wall Buildings". *Proc. XVIII Conference of the Italian National Association of Earthquake Engineering*, Ascoli Piceno, Italy, September 15-19, 2019.

29. Graziotti, F., Toninelli, P., Solenghi, M., **Guerrini, G.**, and Penna, A., "Numerical Simulation of the Nonlinear Earthquake Response of a Monitored URM School Building". *Proc. 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN)*, Hersonissos, Crete, Greece, June 24-26, 2019.

30. Kallioras, S., **Guerrini, G.**, Bracchi, S., Penna, A., and Graziotti, F., "Displacement Demand Equations for the Non-Linear Static Analysis of Short-Period Masonry Structures". *Proc. 13th North American Masonry Conference*, Salt Lake City, UT, USA, June 16-19, 2019.

31. **Guerrini, G.**, Senaldi, I., Di Santo, F., Tomassetti, U., Graziotti, F., Magenes, G., Beyer, K., and Penna, A., "Experimental Seismic Response of a Half Scale Natural Stone Masonry Building Aggregate". *Proc. 10th International Masonry Conference*, Milan, Italy, July 9-11, 2018.

32. Senaldi, I., **Guerrini, G.**, Scherini, S., Morganti, S., Magenes, G., Beyer, K., and Penna, A., "Natural Stone Masonry Characterization for the Shaking-Table Test of a Scaled Building Specimen". *Proc. 10th International Masonry Conference*, Milan, Italy, July 9-11, 2018.

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Il sottoscritto Gabriele Guerrini, nato a Lugo (RA) il 29/10/1983, residente a Imola (BO) in Viale Romeo Galli 4/A, codice fiscale GRRGRL83R29E730N, consapevole delle responsabilità penali previste dagli artt. 75 e 76 del D.P.R. n.445/2000 per le ipotesi di falsità in atti e dichiarazioni mendaci, dichiara che quanto contenuto nel curriculum vitae allegato alla presente dichiarazione, è corrispondente al vero e di essere in possesso di tutti i titoli in esso riportati.
Il sottoscritto, inoltre, esprime il proprio consenso affinché i dati personali forniti possano essere trattati, nel rispetto del D.Lgs. n.196/2003, per gli adempimenti connessi alla procedura.

Pavia, December 1, 2020