PAOLO M. CALVI

Curriculum Vitæ

Department of civil and Environmental Engineering
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Seattle, WA 98195

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EDUCATIONAL HISTORY

University of Toronto, Toronto, ON, Canada
Ph.D., Civil Engineering
June, 2015
Dissertation Title: A Theory for the Shear Behaviour of Cracks Providing a Basis for the Assessment of Cracked Reinforced Concrete Structures
Primary advisor: Professor Michael P. Collins

University of Pavia, Pavia, Italy
M.Sc., Civil Engineering
July, 2010
Thesis Title: Towards Improved Acceleration Floor Spectra for Seismic Design
Primary advisor: Professor Timothy J. Sullivan

University California San Diego (UCSD), San Diego, CA, USA
Visiting Student, Department of Structural Engineering
March 2008 – June 2008

University of Pavia, Pavia, Italy
B.Eng., Civil Engineering
December 2008
Undergraduate Dissertation Title: Toward a Novel Approach for Damage Identification and Health Monitoring of Bridge Structures
Primary advisor: Professor Paolo Venini

EMPLOYMENT HISTORY

University of Washington
Seattle, WA, USA
Assistant Professor, Department of Civil and Environmental Engineering, Sept. 2015 – Present

University at Buffalo (SUNY)
Buffalo, NY, USA
Visiting Researcher, Department of Civil, Structural and Environmental Engineering, Sept. 2014 – June 2015

European Centre for Training and Research in Earthquake Engineering (EUCENTRE)
Pavia, Italy
Researcher, March 2015 – September 2015

University of Toronto
Toronto, ON, Canada
Graduate Research Assistant, Department of Civil and Environmental Engineering, Sept. 2010 – June 2015

University of Toronto
Toronto, ON, Canada
Teaching Assistant, Department of Civil and Environmental Engineering, Sept. 2010 – December 2014

AWARDS AND HONORS

IABSE 2020 Outstanding Paper Award (Scientific Paper).
Erasmus Mundus Third Country Scholarship (course: SUSCOS_M), December 2016.
Doctoral Completion Award, 2015, University of Toronto
Nominee for the 2015 fib Achievement Award for Young Engineers (AAYE).
School of Graduate Studies Conference Grant, 2014, University of Toronto
Graduate Fellowship, 2010 – 2014, University of Toronto
Teaching Assistantship, 2010 – 2014, University of Toronto
Research Assistantship, 2010 – 2015, University of Toronto

AFFILIATIONS AND OTHER APPOINTMENTS

Scuola Superiore Meridionale
Naples, Italy
Affiliate Assistant Professor, Modeling and Engineering Risk and Complexity Department, May. 2020 – Present

PUBLICATIONS

[1] Graduate students advised or co-advised by Calvi
[2] Post-doc advised or co-advised by Calvi
IF: journal impact factor reported by journal as of July 13, 2020
GS: Google Scholar citations as of July 13, 2020
Total GS citations as of July 13, 2020: 396
GS h-index as of July 13, 2020: 11

Refereed archival journal publications

1. T. Yang[1], N.A. Marafi, P.M. Calvi, R. Wiebe, M.O. Eberhard, J.W. Berman (2020). "Accounting for Spectral Shape in a Simplified Method of Analyzing Friction Pendulum Systems", *Engineering Structures*, in Press. (IF: 2.528)
2. O. Davadoorj[1], P.M. Calvi, J. Stanton (2020). "Experimental Response of Headed Stud Connections Subjected to Combined Shear and Bending Actions", *PCI Journal*, September-October 2020 Issue, in Press. (IF: 1.100)
3. O. Davadoorj[1], P.M. Calvi, J. Stanton (2020). "Shear Stress Transfer across Concrete-to-Concrete Interfaces: Experimental Evidence and Available Strength Models", *PCI Journal*, Volume 64, No 4, July-August 2020. (IF: 1.100)

4. R. Davoudi, G.R. Miller, P.M. Calvi, J.N. Kutz (2020). "Computer Vision-Based Damage and Stress State Estimation for Reinforced Concrete and Steel Fiber-Reinforced Concrete Panels", *Structural Health Monitoring Journal,* DOI: 10.1177/1475921719892345. (IF: 4.939)
5. H. Zhang[1], P.M. Calvi, D. Lehman, K. Kuder, C. Roeder (2020). "Response of Recycled Coarse Aggregate Concrete Subjected to Pure Shear", *ASCE Journal of Structural Engineering,* DOI 10.1061/(ASCE)ST.1943-541X.0002620. (IF: 2.021)
6. T. Yang[1], P.M. Calvi, R. Wiebe (2020). "Numerical Implementation of Variable Friction Sliding Base Isolators and Preliminary Experimental Results", *Earthquake Spectra,* DOI 10.1177/8755293019891721. (IF: 2.900, GS: 1 citations)
7. L.F. Aragaw[1], P.M. Calvi (2020). "Comparing the Performance of Traditional Shear-Wall and Rocking Shear-Wall Structures Designed using the Direct-Displacement Based Design Approach", *Bulletin of Earthquake Engineering*, Volume 18, pp. 1345–1369. https://doi.org/10.1007/s10518-019-00740-y (IF: 2.406, GS: 2 citations)
8. M. Moratti, F. Gaia, S. Martini, C. Tsioli, G. Grecchi, C. Casotto, G.M. Calvi, D. Den Hertog, P.M. Calvi, G.T. Proestos (2019). "A Methodology for the Seismic Multilevel Assessment of Unreinforced Masonry Church Inventories in the Groningen Area", *Bulletin of Earthquake Engineering,* Volume 17, Issue 8, pp. 4625-4650. https://doi.org/10.1007/s10518-019-00575-7. (IF: 2.406, GS: 4 citations)
9. G.M. Calvi, M. Moratti, G.J. O'Reilly, N. Scattarreggia[1], R. Monteiro, D. Malomo, P.M. Calvi, R. Pinho (2019). "Once upon a Time in Italy: The Tale of the Morandi Bridge", *Structural Engineering International*, Volume 29, Issue 2, pp. 198-217. (IF: 0.621, GS: 31 citations)
10. D. Perrone, P.M. Calvi, R. Nascimbene, E. Fischer, G. Magliulo (2019). "Seismic performance and damage observation of non-structural elements during the 2016 central Italy earthquakes", *Bulletin of Earthquake Engineering,* Volume 17, Issue 10, pp. 5655-5677. (IF: 2.406, GS: 27 citations)
11. L. Di Sarno, F. da Porto, G. Guerrini, P.M. Calvi, G. Camata, A. Prota (2019). "Seismic performance assessment of bridges during the 2016 Central Italy earthquakes", *Bulletin of Earthquake Engineering*, Volume 17, Issue 10, pp. 5729-5761. (IF: 2.406, GS: 13 citations)
12. L. Aragaw[1], P.M. Calvi (2018). "Earthquake-Induced Floor Accelerations in Rocking RC Shear Wall Structures", *Journal of Earthquake Engineering*, DOI: 10.1080/13632469.2018.1548393. (IF: 2.754, GS: 2 citations)
13. S. Timsina[1], P.M. Calvi (2018). "Variable Friction Base Isolation Systems: Seismic Performance and Preliminary Design", *Journal of Earthquake Engineering,* DOI: *10.1080/13632469.2018.1504837.* (IF: 2.754, GS: 3 citations)
14. S. Mazzoni, G. Castori, C. Galasso, P.M. Calvi, R. Dreyer, E. Fischer, A. Fulco, J. Wilson, A. Penna (2018). "2016-17 Central Italy Earthquake Sequence Seismic Retrofit Policy and Effectiveness", *Earthquake Spectra,* Volume 34, Issue 4, pp. 1671-1691. (IF: 2.900, GS: 10 citations)
15. P.M. Calvi, G.T. Proestos, D.M. Ruggiero (2018). "Towards the Development of Direct Crack-Based Assessment of Structures", *ACI Structural Journal*, SP 328, pp. 9.1-9.20. (IF: 1.287, GS: 4 citations)
16. P.M. Calvi, E.C. Bentz, M.P. Collins (2018). "Model for Assessment of Cracked Reinforced Concrete Membrane Elements Subjected to Shear and Axial Loads", *ACI Structural Journal*, Volume 115, No. 2, pp. 501-509. (IF: 1.287, GS: 8 citations)

17. P.M. Calvi, G.M. Calvi (2018). "Historical development of friction-based seismic isolation systems", *Soil Dynamics and Earthquake Engineering*, Volume 106, pp. 14-30. (IF: 2.723, GS: 17 citations)
18. P.M. Calvi, E.C. Bentz, M.P. Collins (2017). "The Pure Mechanics Crack Model for Cracked Reinforced Concrete Elements Transferring Shear and Axial Stresses", *ACI Structural Journal*, Volume 114, Issue 2, pp. 545-554. (IF: 1.287, GS: 11 citations)
19. P.M. Calvi, M. Moratti, G.M. Calvi (2016). "Seismic isolation devices based on sliding between surfaces with variable friction coefficient", *Earthquake Spectra*, Volume 32, Issue 4, pp. 2291-2315. (IF: 2.900, GS: 23 citations)
20. P.M. Calvi, E.C. Bentz, M.P. Collins (2016). "Reversed Cyclic Experiments on Shear Stress Transfer across Cracks in Reinforced Concrete Elements", *ACI Structural Journal*, Volume 113, Issue 4, pp. 851-859. (IF: 1.287, GS: 13 citations)
21. P.M. Calvi, D.M. Ruggiero (2016). "Numerical Modelling of Variable Friction Base Isolators", *Bulletin of Earthquake Engineering*, Volume 14, Issue 2, pp. 549-568. (IF: 2.406, GS: 17 citations)
22. P.M. Calvi, T.J. Sullivan (2014). "Estimating Floor Spectra in Multiple Degree of Freedom Systems", *Earthquakes and Structures*, Volume 7, Issue 1, pp. 017-38. (IF: 1.573, GS: 57 citations)
23. P.M. Calvi (2014). "Relative Displacement Floor Spectra for Seismic Design of Non-structural Elements", *Journal of Earthquake Engineering*, Volume 18, Issue 7, pp. 1037-1059. (IF: 2.754, GS: 24 citations)
24. T.J. Sullivan, P.M. Calvi, R. Nascimbene (2013). "Towards Improved Floor Spectra Estimates for Seismic Design", *Earthquakes and Structures*, Volume 4, Issue 1, pp. 109-132. (IF: 1.573, GS: 91 citations)

Conference proceedings and other non-journal articles

Fully refereed publications

1. N. Scattarreggia, A. Orgnoni, D. Malomo, P.M. Calvi, M. Moratti, G.M. Calvi, R. Pinho, "Computational forensic analysis of bridge collapses", SEI-ASCE Structures Congress 2021, Seattle, Washington, USA, March 10th to 13th 2021.
2. T.Z. Yeow, K. Kusunoki, I. Nakamura, Y. Hibino, T. Ohkubo, T. Seike, S. Yagi, T. Mukai, P. M. Calvi, M. Moustafa, S. Fukai, "The 2019 Tokyo Metropolitan Resilience Project E-Defense Test of a 3-Story Disaster Management Center", 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020. (GS: 0 citations)
3. T. Yang[1], N. Marafi, P.M. Calvi, R. Wiebe, M.O. Eberhard, J.W. Berman, "Evaluation of Displacement-Based Design Methods for Structures with Friction Pendulum Systems", 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020. (GS: 0 citations)
4. P.M. Calvi, T. Yang[1], R. Wiebe, "Development of Variable Friction Pendulum Systems", 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020. (GS: 0 citations)
5. M. Furinghetti, T. Yang[1], P.M. Calvi, A. Pavese, "Dynamic Response of Curved Surface Slider Devices under Severe Input Motions", 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020. (GS: 0 citations)
6. H. Zhang[1], K. Kuder, D. Lehman, P.M. Calvi, C. Roeder, "Effect of Recycled Concrete Aggregate on the Shear Behavior of Reinforced Concrete Panels", Fifth International

Conference on Sustainable Construction Materials and Technologies (SCMT5), London, UK, 14-17 July 2019. (GS: 0 citations)

7. T. Yang[1], N. Marafi, P.M. Calvi, R. Wiebe, "Impact of Simulated M9 Cascadia Subduction Zone Motions on Base Isolated Structures", 12th Canadian Conference on Earthquake Engineering, Quebec City, Canada, June 17-20, 2019. (GS: 0 citations)
8. S.A. Bergquist[1], P.M. Calvi, R. Wiebe, "Introducing Adaptive Variable Friction Base Isolation Systems", 12th Canadian Conference on Earthquake Engineering, Quebec City, Canada, June 17-20, 2019. (GS: 1 citations)
9. M. Moratti, F. Gaia, S. Martini, C. Tsioli, G. Grecchi, G.M. Calvi, D. Den Hertog, P.M. Calvi, G.T. Proestos, "A Multilevel Methodology for the Seismic Assessment of Unreinforced Masonry Church Inventories in the Groningen Area", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018. (GS: 0 citations)
10. M. Moratti, F. Gaia, S. Martini, A. Tomasi, C. Tsioli, G. Grecchi, S. Ozcebe, G.M. Calvi, D. Den Hertog, P.M. Calvi, G.T. Proestos, "Seismic Assessment of Unreinforced Masonry Terraced and Semi-Detached Houses in the Groningen Area, A Knowledge Based Support System", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018. (GS: 0 citations)
11. T.Y. Yang[1], P.M. Calvi, R. Wiebe, "Numerical Implementation and Investigation of Variable Friction Sliding Base Isolators", 11th U.S. National Conference on Earthquake Engineering, Los Angeles, California, 2018. (GS: 1 citations)
12. L. Aragaw[1], P.M. Calvi, "Floor Spectra in Hybrid Base-Rocking Wall Buildings", 11th U.S. National Conference on Earthquake Engineering, Los Angeles, California, 2018. (GS: 0 citations)
13. S. Timsina[1], P.M. Calvi, "Damping properties of variable friction base isolation systems", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018. (GS: 4 citations)
14. A. Christman[1], P.M. Calvi, "Seismic Risk Assessment of Reinforced Concrete Bridges in Washington State Using a Performance Based Adaptive Methodology", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018. (GS: 0 citations)
15. P.M. Calvi, G.T. Proestos, D.M. Ruggiero, "Towards the Development of Direct Crack-Based Assessment of Structures", *ACI Convention*, March 25-29 2018, Salt Lake City, UT. (GS: 1 citations)
16. G.M. Calvi, P.M. Calvi, M. Moratti (2017). "Seismic isolation of buildings using devices based on sliding between surfaces with variable friction coefficient", *Innovative Infrastructure Solutions*, Volume 2, Issue 1, pp. 39. (GS: 2 citations)
17. P.M. Calvi, S. Timsina[1], "Numerical Study of the seismic behavior of variable friction base isolation system", 39th IABSE Symposium – Engineering the Future, September 21-23 2017, Vancouver, Canada. (GS: 6 citations)
18. P.M. Calvi, D.M. Ruggiero "Earthquake-Induced Floor Accelerations in Base Isolated Structures", 16th World Conference on Earthquake Engineering, 16WCEE 2017, Santiago Chile, January 9th to 13th 2017. (GS: 4 citations)
19. P.M. Calvi, E.C. Bentz, M.P. Collins "Shear Stress Transfer across Major Cracks in Reinforced Concrete", Proceedings of the 10th fib International PhD Symposium in Civil Engineering July 21 to 23, 2014, Université Laval, Québec, Canada. (GS: 0 citations)
20. P.M. Calvi, T.J. Sullivan, "Improved estimation of floor spectra in RC wall buildings", Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014. (GS: 3 citations)

Refereed by abstract only

1. T.J. Peruchini[1], J. Stanton, P.M. Calvi, "Longitudinal Deck Joints between Concrete Girders Made Using UHPC", The Third International Bridge Seismic Workshop, 3rd IBSW Seattle, Washington, USA - October 1st to 4th, 2019. (GS: 0 citations)
2. A. Orgnoni[1], N. Scattarreggia[1], D. Malomo, P.M. Calvi, M. Moratti, G.M. Calvi, R. Pinhom "Seismic Assessment of Concrete Balanced-System Bridges", The Third International Bridge Seismic Workshop, 3rd IBSW Seattle, Washington, USA - October 1st to 4th, 2019. (GS: 0 citations)
3. T. Yang[1], U. Ozcamur, P.M. Calvi, R. Wiebe, E. Bruschi[1], V. Quaglini, H. Sucuoglu, A. Pavese, "Experimental Investigation of the Behavior of Variable Friction Base Isolation Systems", Proceedings of the 7th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete island, Greece, 24-26 June, 2019. (GS: 1 citations)
4. H. Aghabeigi, G. Proestos, P.M. Calvi "Seismic Assessment of a Full Scale Rocking Shear Wall Structure", Proceedings of the 5th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete Island, Greece, 25 - 27 May 2015. (GS: 0 citations)
5. T.J. Sullivan, P.M. Calvi, D.P. Welch, "Estimating roof-level acceleration spectra for single storey buildings", Proceedings of the 4th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Kos island, Greece, 2013. (GS: 3 citations)
6. P.M. Calvi, M. Pingaro, P. Venini, "Truly-mixed finite-elements for the analysis of viscoelastic devices", Proceedings of the 20th AIMETA Conference, Bologna, Italy, 2011. (GS: 0 citations)
7. P.M. Calvi, P. Venini, "Toward a novel approach for damage identification and health monitoring of bridge structures", Proceedings of the 19th AIMETA Conference, Ancona, Italy, 2009. (GS: 0 citations)

Complete books written
None

Parts of books (chapters in edited books)

1. G.M. Calvi, M. Moratti, N. Scattarreggia[1], V. Özsaraç, P.M. Calvi, R. Pinho, "Numerical investigations on the collapse of the Morandi Bridge", *Geotechnical, Geological and Earthquake Engineering book series,* Springer: Tracts on Transportation and Traffic series. In press.

Books edited
None

Journal issues edited
None

Patents submitted and/or awarded
None

Papers submitted (for refereed archival journal publication)

1. T.J. Peruchini[1], J. Stanton, P.M. Calvi, "Longitudinal Joints between Deck Bulb Tee Girders Made with Non-proprietary UHPC", *ASCE Bridge Journal*. (IF: 1.065)

2. T. Yang[1], S. Bergquist[1], P.M. Calvi, R. Wiebe, "Improving Seismic Performance Using Adaptive Variable Friction Systems", *Engineering Structures*. (IF: 2.528)
3. M. Furinghetti, T. Yang[1], P.M. Calvi, A. Pavese, "Experimental Evaluation of Extra-Design Displacement Capacity for Curved Surface Slider Devices", *Soil Dynamics and Earthquake Engineering*. (IF: 2.723)

Abstracts, letters, non-refereed papers, technical reports

Non-refereed papers

1. P.M. Calvi, G. Faga, G.M. Calvi (2018). "Sviluppo storico dei sistemi di isolamento sismico ad attrito", *Progettazione Sismica*, Volume 10, Issue 2 (In Italian). (GS: 0 citations)
2. P.M. Calvi, M. Moratti, A. Filiatrault (2015). "Role and importance of non-structural elements in the seismic vulnerability of school buildings", *Progettazione Sismica*, Volume 6, Issue 3 (In Italian). (GS: 2 citations)
3. T.J. Sullivan, P.M. Calvi, D. Bolognini (2015). "Evaluation of floor spectra for the seismic design of non-structural elements", *Progettazione Sismica*, Volume 6, Issue 3 (In Italian). (GS: 1 citations)
4. P.M. Calvi, M. Moratti, G.M. Calvi (2015). "Seismic isolation devices based on variable friction sliding materials", *Progettazione Sismica*, Volume 6, Issue 1 (In Italian). (GS: 0 citations)

Technical reports

1. J. Stanton, P.M. Calvi, T. Tardieu[1], S. Turner[1], "Use of Hollow Prestressed Concrete Pile-Columns for Bridges in Seismic Regions" Washington (State). Dept. of Transportation. Office of Research and Library Services, 2020.
2. Al. et P.M. Calvi, "D9.1 - Technical report on SERA Transnational Access activities TA1-TA10 M24", Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe, Work Package WP8-WP17, April 30, 2020.
3. P.M. Calvi, "Earthquake-resistant construction system composed of steel-concrete composite beams, columns and beam-to-column joints: Explanatory Notes on Design Recommendations", Technical Report submitted to TECNOSTRUTTURE, February 2020.
4. P.M. Calvi, "Earthquake-resistant construction system composed of steel-concrete composite beams, columns and beam-to-column joints. Beam-Column Joints and Plastic Hinge Regions: Proposed Experimental Program", Technical Report submitted to TECNOSTRUTTURE, January 2020.
5. P.M. Calvi, "Earthquake-resistant construction system composed of steel-concrete composite beams, columns and beam-to-column joints: Special Considerations for Beam-Column Joints and Plastic Hinge regions", Technical Report submitted to TECNOSTRUTTURE, November 2019.
6. P.M. Calvi, "Earthquake-resistant construction system composed of steel-concrete composite beams, columns and beam-to-column joints: Design Recommendations", Technical Report submitted to TECNOSTRUTTURE, October 2019.
7. T.J. Peruchini[1], J. Stanton, P.M. Calvi, "Investigation of Ultra High-Performance Concrete for Longitudinal Joints in Deck Bulb Tee Bridge Girders", Washington (State). Dept. of Transportation. Office of Research and Library Services, 2017. (GS: 2 citations)
8. P.M. Calvi, "A theory for the shear behaviour of cracks providing a basis for the assessment of cracked reinforced concrete structures", PhD dissertations, University of Toronto, Canada, June 2015. (GS: 7 citations)

9. P.M. Calvi, M. Moratti, A. Filiatrault, "Analisi della Risposta di Elementi Non Strutturali durante Terremoti Passati", technical report submitted to the European Centre for Training and Research in Earthquake Engineering (Eucentre), Pavia, Italy, June, 2015.
10. P.M. Calvi, A. Filiatrault, "Assessment of Cracked Reinforced Concrete Bridge Structures", technical report submitted to the European Centre for Training and Research in Earthquake Engineering (Eucentre), Pavia, Italy, December 31, 2014.
11. P.M. Calvi, A. Filiatrault, "Vulnerabilità degli Elementi non Strutturali in Edifici Scolastici", technical report (in Italian) submitted to the European Centre for Training and Research in Earthquake Engineering (Eucentre), Pavia, Italy, December 1, 2014.
12. P.M. Calvi, A. Filiatrault, "Role and Importance of Non-Structural Elements in the Seismic Vulnerability of School Buildings in Past Earthquakes", technical report submitted to the European Centre for Training and Research in Earthquake Engineering (Eucentre), Pavia, Italy, November 1, 2014.

Other significant research dissemination (web sites, software, Wikis, etc.)
None

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars

1. 2019 NHERI-E-Defense Meeting, Miki, Japan, *Japan-U.S. Collaboration on the Seismic Performance of Reinforced Concrete Structures*, December 2019.
2. SEAW Seattle Chapter and Southwest Chapter Joint Meeting, *Response to the August 24, 2016 Central Italy Earthquake*, April 2017.
3. University of Liege, Belgium, *Advanced Design of Reinforced Concrete Structures*, December 2016.
4. ARUP, Toronto, Canada, *Performance Assessment of Reinforced Concrete Structures Subject to Complex Loading Conditions*, April 2015.
5. University of Nevada, Reno, Department of Civil and Environmental Engineering, *Performance Assessment of Reinforced Concrete Structures Subject to Complex Loading Conditions*, April 2015.
6. University of Washington, Seattle, *Department of Civil and Environmental Engineering, Performance Assessment of Reinforced Concrete Structures Subject to Complex Loading Conditions*, March 2015.
7. University at Buffalo, The State University of New York, Department of Civil, Structural and Environmental Engineering Performance, *Towards Floor Response Spectra Estimates for Seismic Design*, February 2013.
8. University of Toronto, Department of Civil and Environmental Engineering, *Response of Heavily Cracked RC Membrane Elements Subjected to Cyclic and Reverse Cyclic Loads*, October 2012.
9. Queen's University, Department of Civil and Environmental Engineering, *An Experimental Campaign: Preliminary Results on Aggregate Interlock Behaviour*, October 2011.

Presentations given at conferences (presenter in bold).

1. S. Ahn[1], **P.M. Calvi**, D. Lehman, "Shear Friction Capacity of Concrete Cold Joints", *ACI Convention*, October 20-24 2019, Cincinnati, OH, USA.

2. T.J. Peruchini[1], J. Stanton, **P.M. Calvi**, "Longitudinal Deck Joints between Concrete Girders Made Using UHPC", The Third International Bridge Seismic Workshop, 3rd IBSW Seattle, Washington, USA - October 1st to 4th, 2019.
3. A. Orgnoni[1], N. Scattarreggia[1], **D. Malomo**, P.M. Calvi, M. Moratti, G.M. Calvi, R. Pinhom "Seismic Assessment of Concrete Balanced-System Bridges", The Third International Bridge Seismic Workshop, 3rd IBSW Seattle, Washington, USA - October 1st to 4th, 2019. (GS: 0 citations)
4. H. Zhang[1], **K. Kuder**, D. Lehman, P.M. Calvi, C. Roeder, "Effect of Recycled Concrete Aggregate on the Shear Behavior of Reinforced Concrete Panels", Fifth International Conference on Sustainable Construction Materials and Technologies (SCMT5), London, UK, 14-17 July 2019.
5. T. Yang[1], U. Ozcamur, P.M. Calvi, R. Wiebe, **E. Bruschi[1]**, V. Quaglini, H. Sucuoglu, A. Pavese, "Experimental Investigation of the Behavior of Variable Friction Base Isolation Systems", Proceedings of the 7th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete island, Greece, 24-26 June, 2019.
6. **T. Yang[1]**, N. Marafi, P.M. Calvi, R. Wiebe, "Impact of Simulated M9 Cascadia Subduction Zone Motions on Base Isolated Structures", 12th Canadian Conference on Earthquake Engineering, Quebec City, Canada, June 17-20, 2019.
7. **S.A. Bergquist[1]**, P.M. Calvi, R. Wiebe, "Introducing Adaptive Variable Friction Base Isolation Systems", 12th Canadian Conference on Earthquake Engineering, Quebec City, Canada, June 17-20, 2019.
8. S. Ahn[1], **P.M. Calvi**, D. Lehman, "Shear Friction Capacity of Concrete Joints with High Strength Reinforcement", *ACI Convention*, October 14-18 2018, Las Vegas, NV, USA.
9. **M. Moratti**, F. Gaia, S. Martini, C. Tsioli, G. Grecchi, G.M. Calvi, D. Den Hertog, P.M. Calvi, G.T. Proestos, "A Multilevel Methodology for the Seismic Assessment of Unreinforced Masonry Church Inventories in the Groningen Area", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018.
10. **M. Moratti**, F. Gaia, S. Martini, A. Tomasi, C. Tsioli, G. Grecchi, S. Ozcebe, G.M. Calvi, D. Den Hertog, P.M. Calvi, G.T. Proestos, "Seismic Assessment of Unreinforced Masonry Terraced and Semi-Detached Houses in the Groningen Area, A Knowledge Based Support System", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018.
11. **T.Y. Yang[1]**, P.M. Calvi, R. Wiebe, "Numerical Implementation and Investigation of Variable Friction Sliding Base Isolators", 11th U.S. National Conference on Earthquake Engineering, Los Angeles, California, 2018.
12. L. Aragaw[1], **P.M. Calvi**, "Floor Spectra in Hybrid Base-Rocking Wall Buildings", 11th U.S. National Conference on Earthquake Engineering, Los Angeles, California, 2018.
13. S. Timsina[1], **P.M. Calvi**, "Damping properties of variable friction base isolation systems", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018.
14. A. Christman[1], **P.M. Calvi**, "Seismic Risk Assessment of Reinforced Concrete Bridges in Washington State Using a Performance Based Adaptive Methodology", 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 2018.
15. **P.M. Calvi**, G.T. Proestos, D.M. Ruggiero, "Towards the Development of Direct Crack-Based Assessment of Structures", *ACI Convention*, March 25-29 2018, Salt Lake City, UT, USA.

16. **G.M. Calvi**, P.M. Calvi, M. Moratti (2017). "Seismic isolation of buildings using devices based on sliding between surfaces with variable friction coefficient", *Innovative Infrastructure Solutions*, Volume 2, Issue 1, pp. 39. (GS: 0 citations)
17. P.M. Calvi, **S. Timsina[1]**, "Numerical Study of the seismic behavior of variable friction base isolation system", 39th IABSE Symposium – Engineering the Future, September 21-23 2017, Vancouver, Canada.
18. **P.M. Calvi**, D.M. Ruggiero "Earthquake-Induced Floor Accelerations in Base Isolated Structures", 16th World Conference on Earthquake Engineering, 16WCEE 2017, Santiago Chile, January 9th to 13th 2017.
19. H. Aghabeigi, **G. Proestos**, P.M. Calvi "Seismic Assessment of a Full Scale Rocking Shear Wall Structure", Proceedings of the 5th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete Island, Greece, 25 - 27 May 2015.
20. **P.M. Calvi**, E.C. Bentz, M.P. Collins "Shear Stress Transfer across Major Cracks in Reinforced Concrete", Proceedings of the 10th fib International PhD Symposium in Civil Engineering July 21 to 23, 2014, Université Laval, Québec, Canada.
21. P.M. Calvi, **T.J. Sullivan**, "Estimating Floor Spectra in Multiple Degree of Freedom Systems", Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014.
22. **T.J. Sullivan**, P.M. Calvi, D.P. Welch, "Estimating roof-level acceleration spectra for single storey buildings", Proceedings of the 4th ECCOMAS thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Kos island, Greece, 2013.
23. P.M. Calvi, M. Pingaro, **P. Venini**, "Truly-mixed finite-elements for the analysis of viscoelastic devices", Proceedings of the 20th AIMETA Conference, Bologna, Italy, 2011.
24. P.M. Calvi, **P. Venini**, "Toward a novel approach for damage identification and health monitoring of bridge structures", Proceedings of the 19th AIMETA Conference, Ancona, Italy, 2009.

Professional society memberships.

American Concrete Institute (ACI), 2016 - present
Earthquake Engineering Research Institute (EERI), 2016 - present
International Association for Bridge and Structural Engineering (IABSE), 2016 – 2019
Member of Italian Society for Civil Engineering, 2011 - present

Referee/Reviewer

Journals: Journal of Earthquake Engineering, Earthquake Engineering and Engineering Vibration, ACI Structural Journal, Earthquake Spectra, Smart Structures and Systems, An International Journal, Engineering Structures, Journal of Structural Engineering, International Journal of Advanced Structural Engineering, European Journal of Environmental and Civil Engineering, Civil Engineering Infrastructures Journal, Geosciences.

Conferences: 15th World Conference on Earthquake Engineering (Lisbon, September 2012), 39th IABSE Symposium – Engineering the Future (Vancouver, September 2017), 16th World Conference on Earthquake Engineering (Santiago, Chile 2017), 16th European Conference on Earthquake Engineering.

GRADUATE STUDENTS

Chaired Doctoral Students

Student Name	My Role	Dissertation Topic	Completed	Current Employer
Tianye Yang	Chair (co-chair: Wiebe)	High Performance Friction Type Bearings for Seismic Isolation	Spring, 2020	Simpson Gumpertz & Heger

Current Doctoral Students

Student Name	My Role	Dissertation Topic	Status	Estimated Completion
Eleonora Bruschi (Polytechnic of Milan)	Co-chair (chair: Quaglini)	Design and characterization of Lead-Extrusion Dampers with adaptive behaviour	Passed general exam	Spring, 2021

Chaired Masters Students

Student Name	My Role	Level of Supervision	Thesis Topic	Completed (year)	Current Employer
Stephan Ahn	Chair (co-chair: Lehman)	MSCE Thesis	Shear Friction Capacity of Concrete Joints with High Strength Reinforcement	Spring, 2020	Degenkolb Engineers
Sam Turner	Co-chair (chair: Stanton)	MSCE Thesis	Seismic Retrofit of Bridges Supported on Hollow Core Prestressed Concrete Pile-Columns	Winter, 2020	Coughlin Porter Lundeen
Sarah Bergquist	Chair (co-chair: Wiebe)	MSCE Thesis	Behavior and Design of an Adaptive Variable Friction Base-Isolation System	Spring, 2019	Degenkolb Engineers
Tasha Tardieu	Co-chair (chair: Stanton)	MSCE Thesis	Seismic Evaluation of Hollow Core Prestressed Concrete Bridge Column-Piles in Washington State	Spring, 2019	Unknown
Audrey Davaadorj	Chair (co-chair: Stanton)	MSCE Thesis	Shear Stress Transfer across Concrete-to-Concrete and Steel-to-Concrete Interfaces	Spring, 2018	KPFF Consulting Engineers
Timothy Peruchini	Co-chair (chair: Stanton)	MSCE Thesis	Investigation of Ultra High-Performance Concrete for Longitudinal Joints in Deck Bulb Tee Bridge Girders	Winter, 2017	Reid Middleton
Sandip Timsina	Chair	MSCE Thesis	A Study of Variable Friction Base Isolation Systems	Spring, 2017	Fossatti Pawlak Structural Engineers
Abigail Christman	Chair	MSCE Thesis	Earthquake Risk Assessment of Reinforced Concrete Bridges in Washington State Using Pushover Analysis	Spring, 2017	Thornton Tomasetti

Leikune Aragaw	Chair	MSCE Thesis	Floor Response Spectra in Hybrid Base-Rocking and Reinforced Concrete Wall Buildings	Spring, 2017	Magnusson Klemencic Associates

Current Masters Students

Student Name	My Role	Level of Supervision	Status	Estimated Completion
Ann Albright	Chair	MSCE Thesis	Started Spring 2020	Spring, 2021
Tatsuiko Sweet	Chair (co-chair: Lowes)	MSCE Thesis – On PhD Track	Started Winter 2020, Passed Qualifying Exam Spring 2020	Spring, 2021 (MSCE) Spring, 2024 (PhD)
William Galik	Chair	MSCE Thesis – On PhD Track	Started Winter 2020, Passed Qualifying Exam Spring 2020	Spring, 2021 (MSCE) Spring, 2024 (PhD)
Danielle Voytko	Chair (co-chair: Stanton)	MSCE Thesis	Completed coursework, close to research project completion	Autumn, 2020

Undergraduate Students Supervision

Student Name	My Role	Level of Supervision	Status	Estimated Completion
Younis Riyami	Advisor	Individual Study	Completed	Spring, 2020
Ian McWhirter	Advisor	Individual Study	Completed	Summer/Fall, 2017
Dakota Hunsaker	Advisor	Individual Study	Completed	Summer, 2017

Other Significant Student Supervision

Visiting graduate student advising

Student Name	My Role	Level of Supervision	Home Institution	Dates of Supervision
Nicola Scattarreggia (PhD)	Advisor during visitation	PhD Dissertation	IUSS Pavia (Italy)	2020-2021
Andrea Orgnoni (PhD)	Advisor during visitation	PhD Dissertation	IUSS Pavia (Italy)	2020-2021
Huang Weiguo (PhD)	Advisor during visitation (co-advisor: Wiebe)	Research project	Nanjing Tech University, China	2020-2021
Mohamad Alipour (PhD)	Co-advisor during visitation (advisor: Miller)	Research project	University of Virginia	2018
Huan Zhang (PhD)	Advisor during visitation (co-advisor: Lehman)	Research project	HIT (China)	2018-2019

Alexander Kagermanov (Post-Doc)	Advisor during visitation	Research project	UME School (Italy)	2016-2017
Giulia Scagliotti (MSCE)	Advisor during visitation	MSCE Thesis	University of Pavia, Italy	2016-2017 (Graduation 2017)

Membership on PhD degree committees

Student Name	Department, Institution	Degree	Date
Sarah Wichman	CEE, UW	PhD	2021 (expected)
Jarrod Zaborac	CEE, UT Austin	PhD	2021 (expected)
Tom Lin	CEE, UW	PhD	2021 (expected)
Kamal Ahmed	CEE, UW	PhD	2020 (expected)
Rouzbeh Davoudi	CEE, UW	PhD	Spring 2019
A. Gonzalez-Fonseca	CEE, IUSS Pavia	PhD	Winter, 2016
D. Welch	CEE, IUSS Pavia	PhD	Winter, 2016
A. Kagermanov	CEE, IUSS Pavia	PhD	Winter, 2016
R. Milanesi	CEE, IUSS Pavia	PhD	Winter, 2016
C. Nievas	CEE, IUSS Pavia	PhD	Winter, 2016
G. O'Reilly	CEE, IUSS Pavia	PhD	Winter, 2016
M. Oliaee	CEE, IUSS Pavia	PhD	Winter, 2016
A. Rosti	CEE, IUSS Pavia	PhD	Winter, 2016
C. Zelaschi	CEE, IUSS Pavia	PhD	Winter, 2016

Membership on Masters' degree committees

Student Name	Department	Degree	Date
Kayla Wielgus	CEE, UW	MSCE	Spring, 2020
Anne Magnus	CEE, UW	MSCE	Fall, 2019
Jakob Sumearll	CEE, UW	MSCE	Spring, 2017
Sarah Wichman	CEE, UW	MSCE	Spring, 2017
Kristina Tsvetanova	CEE, UW	MSCE	Fall, 2016
Andrew Yang	CEE, UW	MSCE	Summer, 2016

RESEARCH ACTIVITIES

Total research funding: $1,377,587
Total of my amounts: $959,217

Funded Research

Funding Agency	*Title*	My role with other PI's and co-PI's	Total Amount, my amount, (subcontracts, Matching if any)	Dates (start – finish)
TECNOSTRUTTURE	*Experimental Testing of a novel precast beam-to-column connection*	Sole PI	Total: $150,000, My Amount: $150,000	03/2020 - 03/2021
NSF	*RAPID/ COLLABORATIVE RESEARCH: Japan-U.S. Collaboration on the Seismic Performance of Reinforced Concrete Structures*	PI (Co-PI: Lowes, UW; Moustafa, UNR)	Total: $188,700 My Amount: $134,080	11/2019 – 10/2020

Funding Agency	*Title*	My role with other PI's and co-PI's	Total Amount, my amount, (subcontracts, Matching if any)	Dates (start – finish)
Mosayk	*Assessment of bridges subjected to impact loads*	Sole PI	Total: $128,380, My Amount: $128,380	09/2019 - 09/2020
TECNOSTRUTTURE	*Development of a novel precast beam-to-column connection*	Sole PI	Total: $67,768, My Amount: $67,768	01/2019 - 01/2020
ABC-UTC	*Evaluation of the Shear Strength of UHPC*	UW PI (Co-PI: Stanton, UW)	Total: $110,000, My Amount: $55,000	03/2019 – 03/2020
ACI Foundation's CRC	*Shear Friction Capacity of Concrete Joints with High Strength Reinforcement*	PI (Co-PI: Lehman, UW)	Total: $87,500, ($30,000 UW match) My Amount: $58,750	01/2019 – 06/2020
SERA	*Dynamic testing of variable friction seismic isolation devices and isolated systems*	UW PI (PI: Haluk Sucuoglu, METU)	Total: $210,000, My Amount: $105,000	01/2018 - 01/2019
WSDOT	*Seismic Evaluation and Retrofit of Hollow Precast Concrete Pile-Columns*	Co-PI (PI: Stanton, UW)	Total: $190,000, My Amount: $95,000	04/2017 - 03/2019
RRF	*Development of high-tech seismic protection devices based on sliding between variable-friction curved surfaces*	Sole PI	Total: $35,239, My Amount: $35,239	03/2017 - 03/2018
PCI	*Shear Stress Transfer across Steel to Concrete Interfaces and Effects of Dowel Action*	PI (Co-PI: Stanton, UW)	Total: $85,000, ($50,000 UW match) My Amount: $67,500	09/2016 - 09/2017
WSDOT	*Investigation of Ultra-High Performance Concrete for Longitudinal Joints in Deck Bulb Tee Bridge Girders*	Co-PI (PI: Stanton, UW)	Total: $125,000, My Amount: $62,500	07/2015 - 06/2017

Pending proposals

Funding Agency	*Title*	My role with other PI's and co-PI's	Total amount, my amount, (Subcontracts, Matching if any)	Dates (start – finish)
NSF*	*CAREER - Development of a novel crack-based assessment approach for reinforced concrete structures in distress*	Sole PI	Total: $500,000 My Amount: $500,000	09/2021 – 08/2026
NSF	*COLLABORATIVE RESEARCH: From visible cracks to structural safety, a*	PI (Co-PI: Proestos, NC State)	Total: $732,436 My Amount: $383,950	01/2021 – 12/2024

	total reversal from traditional assessment approaches for structural concrete			
Italian Ministry of University and Research (RLM Program)	*Assessing reinforced concrete bridges in distress*	Sole PI	Total: $275,000 My Amount: $275,000	09/2020 – 08/2023

*Will be submitted on August 11, 2020

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student Evaluations
Students rated the courses on a scale of 0-5 [0 = very poor, 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent]
Item 1, "The course content as a whole was"
Item 3, "The instructor's contribution to the course was"
Item 4, "The instructor's effectiveness in teaching the subject was"
Reported scores are adjusted medians, which have been corrected by *IASystem* to control for differences in class size, expected grade, and reason for enrollment based on regression analyses of ratings over the previous two academic years in all classes at UW.

Course	Title	Quarter	Credit Hrs	Enrol.	Evals.? Response	Item 1	Item 3	Item 4	Avg. of 1-4
CESG 502	Str. Dyn.	Winter 2020	4	39	Yes, 18/39	4.8	5.0	4.8	4.9
CEE 220	Mech. Of Mat.	Fall 2019	4	69	Yes, 16/69	4.5	4.9	4.6	4.7
CESG 526	Eq. Eng. I	Spring 2019	3	38	Yes, 23/38	4.2	4.2	4.2	4.2
CESG 502	Str. Dyn.	Winter 2019	4	41	Yes, 19/41	4.6	4.6	4.7	4.6
CEE 220	Mech. Of Mat.	Fall 2018	4	71	Yes, 40/71	4.5	4.8	4.9	4.6
CESG 526	Eq. Eng. I	Spring 2018	3	29	Yes, 18/29	4.6	4.8	4.9	4.7
CESG 502	Str. Dyn.	Winter 2018	3	30	Yes, 28/30	4.5	4.4	4.4	4.4
CEE 220 A	Mech. Of Mat.	Spring 2017	4	229	Yes, 150/229	4.2	4.4	4.3	4.3
CEE 220 B	Mech. Of Mat.	Spring 2017	4	48	Yes, 30/48	4.2	4.2	4.1	4.2
CEE 502	Str. Dyn.	Winter 2017	3	44	Yes, 32/44	4.2	4.0	4.3	4.2
CEE 502	Str. Dyn.	Winter 2016	3	43	Yes, 32/43	3.7	3.7	3.6	3.7
CEE 220	Mech. Of Mat.	Fall 2015	4	46	Yes, 22/46	3.3	3.9	3.3	3.4

List of other teaching contributions

- FIU-ABC Webinar, November 8, 2019. "Evaluation of the Shear Strength of UHPC".

- CEE 500 Structure's Group Seminar Series – Autumn 2017, Winter 2019 and Winter 2020
- CEE 500 Seminar – Spring 2016. "Concepts and Technologies for Base Isolation of Buildings".
- ERASMUS MUNDUS MASTER COURSE: "Advanced Design of Reinforced Concrete Structures" (Part of: Sustainable Constructions under Natural Hazards and Catastrophic Events), December 2016, University of Liege, Belgium. (Enrollment: 17; Hours of teaching: 30).

Other supporting documents
None

Teaching Awards, Nominations for Teaching Awards
- Teaching Assistant Award Nomination, 2013, Department of Civil and Environmental Engineering, University of Toronto
- Distinguished Teaching Award Nomination, 2019, University of Washington

SERVICE

Departmental service
- Co-Graduate Advisor, Structural Engineering and Mechanics group, 2019 – present
- Valle Scholarship and Scandinavian Exchange Program Application Reviewer, 2020
- Structural Laboratory Associate Director, 2019 – present
- CEE Faculty Search Executive Committee – Structures (2019)
- CEE Undergraduate Scholarship Applications Reviewer – May 2019
- CEE Mentoring Committee (for Dr. Brett Maurer), 2018 – present
- Faculty Affairs Committee, 2016 – present (chaired in 2017)
- UW EERI Student Chapter Faculty Advisor, 2016 – present
- Undergraduate Admission Committee, 2016 and 2017
- Engineering Discovery Days, 2016 and 2017
- Structural Laboratory Committee, 2015 – present
- Graduate Education Committee, 2015 – 2016

College service
- UW STARS students Faculty mentor (NSF Grant "The Redshirt in Engineering Consortium), 2016 – present

University service
None

Professional society and other service
- Session organizer, 17th World Conference on Earthquake Engineering (17WCEE), Sendai, Japan, September 2021
- Member of ACI Committee 374, Performance-Based Seismic Design of Concrete Buildings, April 2018 – present
- National Academic Qualification as Associate Professor (Italy), September 2018
- Member of ACI - Chester Paul Siess Award for Excellence in Structural Research (SA03), 2017 – 2019

- Member of the Scientific Committee (SC) for the IABSE Symposium in Vancouver, September 2017
- Professional Engineering Licence (Italy), 2011

Community service

- Consultant for Mosayk (Italy). Shear and torsional response of bridge structures subjected to impact loads (09/2019 – ongoing).
- Consultant for Tecnostrutture (Italy). Earthquake-resistant construction system composed of steel-concrete composite beams, columns and beam-to-column joints (01/2019 – ongoing).
- Member of working group investigating the collapse of the Morandi Bridge (Italy), 2018 – present.
- Consultant for NAM "Scope item 30 - Expert system for building 2017" and "Scope item 34 - Coordination and technical assurance of TRI / ARMOX CWG product development" (06/2017 – 06/2018).
- Consultant for Studio Calvi s.r.l. (Pavia, Italy). Seismic assessment of unreinforced masonry houses in the Groningen area (09/2017 – 09/2018).
- Consultant for Studio Calvi s.r.l. (Pavia, Italy). Seismic assessment of unreinforced masonry church inventories in the Groningen area (09/2017 – 09/2018).
- Member of the EERI Reconnaissance (Central Italy Earthquake, August 24, 2016).
- Consultant for Eucentre Foundation (Pavia, Italy). Development of preliminary assessment tools for damaged reinforced concrete bridge structures (12/2014 – 06/2015).
- Consultant for Eucentre Foundation (Pavia, Italy). Preparation of preliminary guidelines for the mitigation of the seismic vulnerability of non-structural elements in school buildings in Italy (12/2014 – 06/2015).

International, national or governmental service

- National Science Foundation (NSF) Panelist. Proposal reviewed: 23. March 2018.
- Concrete Research Council (CRC) of the ACI Foundation Panelist. Proposal reviewed: 8. February 2020.

All other service

None