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A. Education and Employment Information

A1. Education

2011	Ph.D., Structural Engineering University of California, San Diego Advisors: Prof. Joel P. Conte and Prof. Jose Restrepo
2002	M.S., Structural Engineering Instituto Superior Técnico (IST), Portugal Advisor: Prof. Luis Castro
1998	Licenciatura (5-year undergraduate degree) in Civil Engineering, Instituto Superior Técnico (IST), Portugal

A2. Professional Experience

09/2018 – Present	Associate Professor School of Civil and Construction Engineering Oregon State University, USA
01/2019 – Present	Honorary Associate Professor University of Bristol, UK
09/2018 – Present	Adjunct Associate Professor Composite Materials & Engineering Center Washington State University, USA
09/2018 – Present	Adjunct Associate Professor Wood Science and Engineering Oregon State University, USA
12/2011 – 09/2018	Kearney Faculty Scholar, Assistant Professor School of Civil and Construction Engineering Oregon State University, USA Adjunct Faculty Wood Science and Engineering Department Oregon State University, USA
03/ 2002 – 12/2010	Assistant Lecturer Department of Civil Engineering Universidade Nova de Lisboa, Lisbon, Portugal
06/2006 – 09/2006	Engineer Englekirk Partners Consulting Engineers Los Angeles, California, USA
08/1998 – 01/2005	Structural Design Engineer Profico, Lda. Lisbon, Portugal.

B. Teaching, Advising, and Other Assignments

B1. Instructional Summary

B1.1. Credit Courses

Number	Course Title	Term/Year	Credits	Enrollment
CE 534	Structural Dynamics (G)	Winter 2012	4	12
CE 419	CE Capstone (U)	Spring 2012	4	30
CE 382	Structural Theory II (U)	Winter 2013	4	104
CE 580	Advanced Seismic Design (G)	Spring 2013	3	18
CE 534	Structural Dynamics (G)	Fall 2013	4	16
CE 382	Structural Theory II (U) – Sec. 1	Winter 2014	4	57
CE 382	Structural Theory II (U) – Sec. 2	Winter 2014	4	60
CE 588	Probability-based Analysis and Design (G)	Spring 2014	4	18
CE 534	Structural Dynamics (G)	Fall 2014	4	20
CE 382	Structural Theory II (U) – Sec. 1	Winter 2015	4	66
CE 382	Structural Theory II (U) – Sec. 2	Winter 2015	4	29
CE 580	Performance-based Design (G)	Spring 2015	3	7
CE 588	Probability-based Analysis and Design (G)	Winter 2016	4	11
CE 580	Performance-based Design (G)	Spring 2016	3	9
CE 382	Structural Theory II (UG)	Spring 2016	4	55
CE 534	Structural Dynamics (G)	Winter 2017	4	20
CE 382	Structural Theory II (U)	Spring 2017	4	46
CE 534	Structural Dynamics (G)	Winter 2018	4	17
CE 382	Structural Theory II (U)	Winter 2018	4	61
CE 580	Performance-based Design (G)	Spring 2018	3	14
CE 382	Structural Theory II (U)	Spring 2018	4	47
CEM 383	Structures II (U)	Fall 2018	4	111
CE 382	Structural Theory II (U)	Winter 2021	4	75
CE 538	Structural Reliability & Risk (G)	Winter 2021	4	8
CE 580	Performance-based Design (G)	Spring 2021	3	5
CE 645	Wave Forces on Structures (G)	Spring 2021	4	5

U – Undergraduate course; G – Graduate course

B1.2. Non-Credit Courses and Workshops

1. **Workshop on Assessing, Coding, and Marking of Highway Structures in Emergency Situations.** December 2018. Honolulu, Hawaii. Co-taught with Michael Olsen, Gene Roe, Marc Veletzos. Hosted by the Hawaii LTAP.
<http://onlinepubs.trb.org/onlinepubs/trnews/trnews324.pdf>
2. **Assessing, Coding, and Marking of Highway Structures in Emergency Situations.** Feb. 29 - Mar. 1, 2016. Irvine, CA. Co-taught with Michael Olsen and Gene Roe. Hosted by the National Academies of Sciences, Transportation Research Board.
3. **OpenSees on the Road at Oregon State University** (November 2013)
 - Co-organized with Dr. Michael Scott (Oregon State University)
 - URL 1: <http://calendar.oregonstate.edu/event/89558/>
 - Presentations from by: Dr. Frank McKenna (UC Berkeley/PEER); Professor Pedro Arduino (University of Washington); Dr. Michael Scott (Oregon State University); Dr. Andre Barbosa (Oregon State University)
 - Attended by 35 people (Industry, Researchers, and Graduate Students)

B1.3. Course and Curriculum Development

CE 382 – STRUCTURAL THEORY II. (2013 – 2021). This course presents traditional methods in Structural Analysis. It is a continuation of CE 381 – Structural Analysis I. In both courses the book by Hibbeler (Structural Analysis) is covered from one end to the other. In CE382, topics covered include: Analysis of statically determinate and indeterminate structures (beams, frames, trusses); Deflections; Principle of Virtual Work; Introduction to matrix methods for Structural Analysis.

For this course, I prepared all the material from the ground up, based on legacy material developed by colleagues at Oregon State University and various textbooks. Since CE 382 meets for three hours a week for regular lecture and two hours a week for recitation, class materials were developed for both. For the lectures, I developed lecture slides that include the main concepts that students need to understand. In addition, worked examples were prepared and are presented to illustrate how the main concepts and underlying theory are applied. During lecture, focus is placed on explaining the physics behind equations. At the end of each lecture, additional (challenging) problems with answers are provided to spur curiosity and stimulate thinking by exposing students to problems beyond the ones presented in the lecture. In recitation, each week, students are given a problem to work on as a group and turn it in at the end of each class. The objective is that all groups turn in correct and complete solutions, which is achieved in 95% of the cases. During recitation, both myself and the graduate teaching assistants are available in class to provide continuous feedback on an individual and group basis and to support peer group discussions on how to solve and complete the in-class assignments. Additional methods of assessment include weekly homeworks, a midterm examination, and a final examination. All assessment materials are prepared from scratch yearly. At the time of writing this statement, I completed the fifth consecutive year at teaching this course. I have worked hard to show continuous improvement and I have incorporated feedback from the students each year to improve the delivery of the material. Following the first year, I adopted an approach of setting SMART (S – specific, M – measurable, A – attainable, R – relevant, T – time-bound) goals and objectives and improved the communication with the students, which allowed me to show a significant increase in interest from the students.

CE 534 – STRUCTURAL DYNAMICS. (2012 – 2017). In this course, I developed a traditional curriculum to teaching Structural Dynamics, following the first 13 chapters in Chopra’s “Dynamics of Structures” textbook. For this course, I developed hand-written lecture notes, homework problems, and added new opportunities for experiential learning and cooperative learning, namely through development of laboratory experiments as well as exposure to basic skills of computer programming through the use of MATLAB. Topics covered in the course include: analytical and numerical solutions for single, multi-degree of freedom and continuous vibrating systems, behavior of structures, dynamic forces and support motions, and seismic response spectra analysis.

For CE 534, the lecture notes developed complement the textbook by providing in-depth and extended theoretical derivations of the lectured material. Experiential learning opportunities are brought into this course through student exposure to several hands-on exercises in which they use an instructional shake-table to run a set of pre-defined experiments. In terms of creating a cooperative learning experience, students work in groups to apply methods and concepts learnt in the class to the observations from tests performed on the instructional shake-table. Since this course is intensive in terms of the mathematical preparation and background needed by students to succeed in the class, I work on explaining the physics behind the mathematical expressions, by bringing my industry experience to the classroom and presenting real life problems that relate to the mathematical problem under analysis. This approach has been very well received by the students. In terms of programming skills, Python and MATLAB are used as tools for developing solutions to homeworks and in group projects. As many students have no experience with Python or MATLAB when reaching this class, a set of introductory slides to Python and MATLAB were developed.

CE 580 – PERFORMANCE BASED DESIGN. (2014 – 2021). This is a course I developed from scratch. For this course, I developed a new set of slides and gathered literature from the state-of-practice to provide to the students, interesting and engaging, while sometimes challenging, material. The course addresses advanced seismic design of building and bridge systems with emphasis on structural reinforced-concrete building technology, analysis, performance-based design, and nonlinear analysis response verification. Base isolation, self-centering rocking systems, and other emerging systems for design of earthquake resilient systems are also presented. The advanced topics in seismic design are presented by providing journal papers for students to review, while presenting lecture slides with the summary of the main concepts. Models and “toys” are used extensively to illustrate basic structural engineering desired mechanisms. The students develop projects with complete building designs, which they can then use as sample documents presented to potential high-end consulting firms.

CE 588 – PROBABILITY-BASED ANALYSIS AND DESIGN / CE 538 STRUCTURAL RELIABILITY AND RISK ANALYSIS (2014 – 2020). This course focuses on providing students with an understanding of the types of uncertainty encountered in design of civil engineering systems. The main topics covered include: application of probability and statistics in the analysis and design of civil and mechanical engineering systems, probabilistic modeling of loading and resistance, and probability-based design criteria including load and resistance factor design. CE 588 also introduces students to modern methods of structural reliability analysis based on the theory of probability, including both theoretical and computational aspects of structural reliability analysis. Example applications are mainly geared towards structural mechanics, although other examples related to hydraulics, geotechnical, and transportation engineering are also provided. The students learn to derive probability distributions for functions of one or multiple random variables, perform a reliability analysis of an engineering system

given the failure criterion, and determine which random variables are most significant in explaining the failure of an engineering system.

This course was completely restructured. A book by Nowak and Collins (2014) was used as the reference textbook and all but one chapter were covered. A set of lecture notes were developed to explain the theory and expand on many theoretical derivations not developed in the book. Students were also strongly encouraged to read additional material from the literature of the field, which is vast, and a total of 10 book references were made available for the students on the Valley Library. Student assessment included 8 homeworks, a midterm examination, and a term project. Students were introduced to two open-source finite element reliability software (FERUM and OpenSees), which were used for solving homework problems and final project.

Development of both of these tools started at UC Berkeley, but have not gathered large number of contributors and users, which was the main reason for exposing students in this course to these tools, since it prepares students for industry in fields related to insurance engineering, while providing them with the knowledge for the next generation of civil and mechanical engineers.

On the last year in which this course was taught, this course was also used to provide students with an opportunity to develop a seismic risk analysis of downtown Corvallis. Students worked with building inspectors of the City of Corvallis, and developed FEMA 154 – Rapid Visual Assessments of a city block and then developed a complete vulnerability assessment of the city block using reliability and risk concepts learned during the course. This form of assessment was very well received by the students, who were able to use complex concepts and risk assessment tools and bring them into the engineering practice.

B1.4. Team or Collaborative Efforts

CE 645 – WAVE FORCES ON STRUCTURES. (2021). The objectives of this course are to understand and apply (1) Deterministic wave forces on vertical cylinders and wall, (2) Impulsive breaking wave loads, (3) Probabilistic approaches and performance-based designed for coastal structures, and (4) Wave loads on near-coast structures, including tsunami forces. This course was first taught after many years of not being offered in CCE by a Structural Engineering (myself) and a Coastal Engineer (Dr. Danial T. Cox). The course content was adapted to that the materials could be understood by both coastal and structural engineers. The course addresses a need that has been brought up by our industry partners that mention that many structural engineers lack sufficient knowledge to design coastal structures, while coastal engineers lack the knowledge to perform structural designs. To address this need, the course topics are divided two parts. The first part covered in Weeks 1 to 4 focused on providing students with a basic understanding of Coastal Engineering wave phenomena and forces which was taught and organized by the Coastal Engineering faculty. The topics covered included Steady Flow and Hydrodynamic Drag, Wave Force on Piles, Morison’s Equation, Impulsive Wave Loads on Cylinders and Wave Slamming, Wave Force on Walls, Wave Forces on Elevated Structures. The second part covered during Weeks 5 to 8 covered topics on ASCE 7 Flood Loads, and ASCE 7 Tsunami Loads and Effects, including Effects of Debris, Probability & Reliability applied to Coastal Engineering, and lastly Performance-based Design for Coastal Structures. Throughout the term, the students completed several homeworks that were developed assess specific student learning objectives. In addition, during the first six weeks of the term, each student worked with both faculty members to define the scope of their final project, one-on-one at least for 15 mins per week in addition to the self-paced reading needed to develop the understanding of the background information needed to develop the project. The project was centered should be centered on the theme of “Wave Forces and Natural Coastal Hazards” and project topics included, for example: (1) Wave Forces on Offshore, Coastal or Near-Coast Structures, (2) Wave Forces on Structures for Marine Renewable Energy, (3) Tsunami Forces on Essential Facilities

and Lifelines. Projects were completed individually. Students first completed a one-page project Scoping Memo by the end of Week 6. Then, during finals week, there was an oral presentation and the written report submitted as a final deliverable. Presentations were approximately 15 min per person, and written reports were approximately 10-15 pages, excluding cover page and appendices, which allowed students to develop project reports that serve as their portfolio when searching for industry jobs as well as addressing the soft-skills learning objectives of the course. The course overall was very well received by the students and will now be offered every two years to attract advanced graduate students in both structural and coastal engineering.

CE 419 – CIVIL INFRASTRUCTURE DESIGN. (2012). This course provides the capstone design project experience exposing students to problems and issues similar to those encountered in the practice of civil engineering. In this course, in 2012 – which was the only time I taught this course – I was one of six instructors. The organization of the faculty in this course was that there was a lead instructor and additional five instructors, which advised different specialties. I advised the structural team members (30 students). This was taught in 2012, which was the last year that the course was administered in this format, since the format had been unsuccessful for several years. For this course, the main goal for the structural team members was to develop the preliminary design of a sky bridge and multi-modal center (conceptual design of alternatives, design of a representative frame for gravity loads, determination of lateral loads, and some detailing). When needed, minimal lecture notes were provided to guide students on the design of components. The design the students did in this section had to be integrated with the other project elements and detailed in a final report. To aid with the organization of the students and to give them a real-life project experience, weekly deliverables were defined, and these included written assignments. Because each team's projects were different, each assignment included formal letters of transmittal that briefly described the contents of the submittal. All submittals were written so that students could incorporate these easily into the final report. In addition, to introduce students to the concept of time management and book-keeping, students were required to keep track of their "timesheets" and presented those to other members of the team. A portfolio of the work submitted throughout the term was due in week 8.

B1.5. International Teaching

UNIVERSITY OF BRISTOL, BRISTOL, UK. (2019 and 2020). In 2019 and 2020, lined up with my sabbatical leave and research funding buyouts at OSU, I delivered several teaching modules in four (4) courses at the University of Bristol, UK, including (1) Introductory Structural Analysis, (2) Advanced Structural Analysis, (3) Engineering Science 2, and (4) Design and Computing. The total number of students that attended my modules were 94, 150, 650, and 650, respectively. In addition, I served as Head of the Structures Teaching Group during my stay at University of Bristol. The University of Bristol is a top three Civil Engineering program in the UK for research and teaching, supported by great collaborators.

UNIVERSITY OF PORTO, PORTO, PORTUGAL. (2014). I co-organized a workshop on Multi-Hazard Analysis of Structures Using OpenSees. The course was co-organized with researchers from three Portuguese Universities, it was attended by 66 people (Industry, Researchers, and Graduate Students) from 10 different countries. Keynote presentations were delivered by Dr. Pedro Arduino (University of Washington, US); Dr. Andre Barbosa (OSU, US); Dr. Frank McKenna (UC Berkeley/PEER, US); Dr. Lauren Stewart (Georgia Institute of Technology, US); Dr. Asif Usmani (University of Edinburgh, UK). In addition, 12 other presentations were made at the workshop by authors from 7 different countries. Details can be found here: http://web.engr.oregonstate.edu/~barbosa/products/Programme_final_OSD.pdf

UNIVERSITA LA SAPIENZA, ROME, ITALY. (2012). Structural Reliability and Risk Analysis (24 hour summer course). This new course was presented in an “Advanced Summer Course.” The objective of this course was to introduce students to modern methods of structural reliability analysis based on the theory of probability. The course covered both the theoretical and the computational aspects of structural reliability analysis. It also presents the formulation of probability-based or reliability-based design codes. A complete set of lecture slides and homeworks was developed for this intense four-day (24 hour) course.

B2. Student (eSet) and Participant/Client Evaluations

Course No. (credits)	Term	Enroll-ment	# Re-spond-ing	Student Evaluation (#1/#2)*	Required /Elective
CE 534 (4)	Winter 2012	12	11	5.6/5.6	Elective
CE 419 (4)	Spring 2012	30	23	3.1/3.1	Required
CE 382 (4)	Winter 2013	104	53	4.0/4.2	Required
CE 580 (3)	Spring 2013	18	12	4.3/5.0	Elective
CE 534 (4)	Fall 2013	16	14	5.2/5.5	Elective
CE 382 Sec. 1 (4)	Winter 2014	57	51	4.7/5.0	Required
CE 382 Sec. 2 (4)	Winter 2014	60	54	4.7/5.0	Required
CE 588 (4)	Spring 2014	18	16	5.3/5.5	Elective
CE 534 (4)	Fall 2014	20	17	5.4/5.7	Elective
CE 382 Sec. 1 (4)	Winter 2015	66	59	5.0/5.1	Required
CE 382 Sec. 2 (4)	Winter 2015	29	23	5.5/5.6	Required
CE 580 (3)	Spring 2015	7	5	6.0/6.0	Elective
CE 588 (4)	Winter 2016	11	9	4.7/5.3	Elective
CE 580 (3)	Spring 2016	9	7	5.0/5.3	Elective
CE 382 (4)	Spring 2016	55	42	4.8/5.0	Required
CE 534 (4)	Winter 2017	20	19	5.1/5.7	Elective
CE 382 (4)	Spring 2017	46	34	5.3/5.2	Required
CE 534 (4)	Winter 2018	17	9	5.9/5.9	Elective
CE 382 (4)	Winter 2018	61	25	5.1/5.3	Required
CE 580 (3)	Spring 2018	14	5	5.7/5.7	Elective
CE 382 (4)	Spring 2018	47	14	4.4/4.6	Required
CEM 383 (4)	Fall 2018	111	43	5.5/5.5	Required
CE 382 (4)	Winter 2021	75	24	4.4/4.4	Required
CE 538 (4)	Winter 2021	8	6	4.0/4.4	Elective
CE 580 (3)	Spring 2021	5	--	No SET	Elective
CE 645 (4)	Spring 2021	5	--	No SET	Elective

*#1 – Course as a whole / #2 – Instructor’s Contribution; Max. score 6.0/6.0

B3. Advising

B3.1. Graduate Advisees – Completed

Student	Degree	Thesis	Graduated
1. Mohit Srivastava (co-advised A. Sinha, WSE)	M.S.	<i>Structural Design and Testing of Mass Timber Concrete Composite Floor Solutions with Acoustic Interlayers</i>	Fall 2021
2. Mustafa Buniya (co-advised B. Simpson, CCE)	Ph.D.	<i>Seismic Performance and Collapse Assessments of Reinforced Concrete Lateral-Force Resisting Systems</i>	Fall 2020
3. Shrenik Bora (co-advised A. Sinha, WSE)	M.S.	<i>Effects of Moisture Intrusion on the Performance of a Cross-Laminated Timber (CLT) Angle Bracket Connection</i>	Fall 2020
4. Feras Khlef (co-advised J. Ideker, CCE)	Ph.D.	<i>Structural Response of High-Performance Fiber-Reinforced Cementitious Composites: Evaluation, Simulation, and Sensitivity Analysis</i>	Summer 2020
5. Zeyad Al-Sayhood	Ph.D.	<i>Coupled Eulerian-Lagrangian Modeling Approach Applied to Tsunami-like Wave Structure Interaction: Effects of Shielding, Channeling, and Wall Removal</i>	Spring 2020
6. Esther Baas (co-advised M. Riggio, WSE)	M.S.	<i>A Methodological Approach for Structural Health Monitoring of Mass-Timber Buildings Under Construction</i>	Spring 2020
7. Ignace Mugabo (co-advised M. Riggio, WSE)	Ph.D.	<i>Multi-Scale Dynamic Monitoring and Behavior of Cross-Laminated Timber Elements and Systems</i>	Fall 2019
8. Renee Engleson	M.S.	<i>Testing and Modeling of a Cross-Laminated Timber Pier-and-Spandrel Seismic Retrofit Solution for Unreinforced Masonry Buildings.</i>	Fall 2019
9. Bradley Taylor (co-advised A. Sinha, WSE)	M.S.	<i>In-Plane Shear Performance of Cross-laminated Timber and Cross-laminated Timber Concrete Composite Diaphragm Connection Systems</i>	Summer 2019
10. Mohammed Asaad	Ph.D.	<i>Finite Element Modeling Strategies for Seismic Collapse Assessment of Non-Planar Slender Reinforced Concrete Structural Wall Resisting Systems</i>	Spring 2019
11. Sharoo Shrestha (co-advised C. Higgins, CCE)	Ph.D.	<i>Seismic Retrofit of Square Reinforced Concrete Bridge Columns using Titanium Alloy Bars</i>	Spring 2019

12. Mohammad Shafiqul Alam	Ph.D.	<i>Probabilistic Multi-hazard Earthquake-Tsunami Structural Risk Assessment Framework</i>	Spring 2019
13. Kolton Mahr (co-advised A. Sinha, WSE)	M.S.	<i>Elevated Temperature Effects on the Shear Performance of a Cross-Laminated Timber (CLT) Wall-to-Floor Bracket Connection</i>	Spring 2019
14. Christopher Anderson (co-advised J. Morell, WSE)	M.S.	<i>Reassessment of Grading Criteria with Respect to the Flexural Properties of Douglas-fir Crossarms</i>	Spring 2019
15. Nicolas Matus (co-advised D. Trejo, CCE)	M.S.	<i>Performance of High-Strength Steel Reinforcement in Shear Friction Applications.</i>	Summer 2018
16. Rajendra Soti	Ph.D.	<i>Seismic Assessment of Unreinforced and Retrofitted Masonry Buildings using the Applied Element Method</i>	Fall 2017
17. Andre Belejo	Ph.D.	<i>Evaluation of Ground Motion Duration Effects on the Damage Prediction of Building and Bridge Structural and Soil-Structural Systems</i>	Summer 2017
18. Vahid Mahdaviifar (co-advised A. Sinha, WSE)	Ph.D.	<i>Cyclic Performance of Connections Used in Hybrid Cross-Laminated Timber</i>	Spring 2017
19. Mackenzie Lostra (co-advised C. Higgins, CCE)	M.S.	<i>Seismic Performance of Square Reinforced Concrete Columns Retrofitted with Titanium Alloy Bars</i>	Summer 2016
20. Curtis Blank	M.S.	<i>Performance Based Tests on Cross Laminated Timber - Concrete Composite Floor Panels</i>	Summer 2016
21. Syed Baqir Hussain	M.S.	<i>Evaluation of seismic response directional combination rules for existing plan irregular reinforced concrete buildings</i>	Summer 2016
22. Patrick Burns (co-advised M. Olsen, CCE)	M.S.	<i>Multi-objective Loss Assessment of Oregon Bridges Due to Cascading Seismic and Tsunami Hazards</i>	Summer 2015
23. Drew Nielson (co-advised D. Trejo, CCE)	M.S.	<i>High-strength reinforcement for bridges</i>	Spring 2015
24. Amrutha Das (co-advised J. Gambatese, CCE)	M.S.	<i>Risk and Reliability Associated with Use and Reuse of Vertical Formwork</i>	Spring 2014
25. Trevor Carey (co-advised H. Ben Mason, CCE)	M.S.	<i>Multi-hazard Framework and Analysis of Soil-bridge Systems: Long Duration Earthquake and Tsunami Loading</i>	Summer 2014
26. Timothy Link (co-advised D. Trejo, CCE)	M.S.	<i>Seismic Performance of Reinforced Concrete Bridge Columns Constructed with Grade 80 Reinforcement</i>	Spring 2014

27. Anthonie Kramer (co- advised A. Sinha, WSE)	M.S.	<i>Cross-Laminated Timber Engineering: Improvement and Application</i>	Winter 2014
28. Jessica Cawley (co- advised H. Yeh, CCE)	M.S.	<i>Review of Guidelines for the Design of Tsunami Vertical Evacuation Buildings</i>	Winter 2014
29. Garlan Ramadhan	M.S.	<i>Seismic Performance of Diagrid Steel Structures Using Single and Double Friction Mass Dampers</i>	Fall 2013
30. Kyle Romney (co- advised H. Ben Mason, CCE)	M.S.	<i>Soil-bridge Interaction during Long- Duration Earthquake Motions</i>	Spring 2013
31. Yicheng Long	M.S.	<i>Effect of Subduction Zone Earthquakes on SDOF Bridge Models</i>	Spring 2013

B3.2. Graduate Advisees – Current

Student	Degree	Expected Graduation	Advanced to Candidacy (Y/N)
1. Patricio Uarac Pinto	Ph.D.	Spring 2025	N
2. Gustavo Fernando Orozco (co-advised A. Sinha, WSE)	Ph.D.	Spring 2024	N
3. Esther Baas (co-advised M. Riggio, WSE)	Ph.D.	Spring 2023	N
4. Jacob Gesh	M.S.	Spring 2023	N/A
5. Steven Kontra	M.S.	Spring 2023	N/A
6. Carly Loving (co- advised M. Olsen, CCE)	M.S.	Spring 2022	N/A

B3.3. Graduate Thesis or Project Committees

MEng Advisor:

Graduated

1. Wei-Hsuen Lee, 2019
2. Ignace Mugabo, 2018
3. Brian DeMeza, 2018
4. Matthew Kessler, 2016

Minor Professor or Committee Member:

Graduated

1. Jon Huffman, Ph.D., 2020
2. Annabel Shepard, M.S., 2020
3. Stefanie Schulze, M.S., 2020
4. Matt Barner, Ph.D., 2019
5. Christopher Anderson, M.S., 2019
6. Morvarid Dilmaghani, M.S., 2019
7. Dillon Fitzgerald, Ph.D., 2019
8. Lei Zhang, Ph.D., 2017
9. Junhui Lou, Ph.D., 2017
10. Qiang Li, Ph.D., 2017

11. Aiyad Alshimaysawee, M.S., 2017
12. Silas Shields, M.S., 2017
13. Kyle Sullivan, M.S., 2017
14. Thanh Huynh, M.S., 2016
15. Jonathan Knudtsen, M.S., 2016
16. Benjamin Hunter, M.S., 2016
17. William M. Short, M.S., 2016
18. Wennan Li, M.S., 2016
19. Blake Larkin, M.S., 2016
20. Hyoungsu Park, Ph.D., 2016
21. Andrew Hanek, M.S., 2014
22. Therese Pflaum, M.S., 2013
23. Nataliya Kozlova, M.Eng., 2013
24. Anthony Sorentino, M.S., 2012
25. Kathryn Pfretzschner, M.S., 2012
26. Anthony Hafner, M.S., 2012
27. David Taylor, Undergraduate University Honors Thesis, 2012
28. Christina Garrett, Undergraduate University Honors Thesis, 2012

Current

1. Ming Chen, Ph.D. (Civil Engineering)
2. Julie Liu, Ph.D. (Civil Engineering)
3. Tanya Laird, Ph.D. (Civil Engineering and Wood Science and Engineering)
4. Ian Morrell, Ph.D. (Civil Engineering and Wood Science and Engineering)

Graduate Council Representative:

1. Gabriel Gray, M.S., 2021 (Mechanical Engineering)
2. Chuankai Song, Ph.D., 2021 (Mechanical Engineering)
3. Eyad Aynab Moria, M.S., 2021 (Mechanical Engineering)
4. Nathaniel Fillman, M.S., 2021 (Ocean, Earth and Atmospheric Sciences)
5. Kendall Jane Conroy, M.S., 2018 (Wood Science and Engineering)
6. Evan Schmidt, M.S., 2018 (Wood Science and Engineering)
7. Shardul Khandke, M.S., 2018 (Industrial Engineering)
8. Hari Nagarajan, M.S., 2017 (Industrial Engineering)
9. Brandon Massoni, M.S., 2016 (Mechanical Engineering)
10. Mitchell Daniels, M.S., 2016 (Mechanical Engineering)
11. Addison Wisthoff, M.S., 2016 (Mechanical Engineering)
12. Robin Kiff, M.S., 2016 (Mechanical Engineering)
13. Mitchell Colby, M.S., 2013 (Mechanical Engineering)
14. Min Ye, M.S., 2013 (Wood Science and Engineering)
15. Ryan Siegel, PhD, 2012 (Agricultural and Resource Economics)
16. Thomas J. Wright, M.S., 2012 (Mechanical Engineering)
17. Stephen Sills, M.S., 2012 (Mechanical Engineering)

B3.4. Undergraduate Research Assistants

1. Tanner Field (Spring 2021 – Present), Senior
2. Nada Aldaber (Spring 2021 – Present), Senior
3. Lance Parson (Fall 2015 – Fall 2019), Senior
4. Miguel Leon (Fall 2018 – Spring 2019), Senior
5. Joel Turner (Fall 2018 – Spring 2019), Senior
6. Luis Gonzalez (Fall 2017 – Spring 2019), Sophomore
7. Zeping Liu (Summer 2017)
8. Gokul Vasudevan (Summer 2017)

9. Glen Galant (Winter 2017 – Summer 2018)
10. Christopher Anderson (Fall 2016 – Summer 2017)
11. Kirsten Fox (Summer 2016 – Summer 2018)
12. Brad Taylor (Summer 2016 – Spring 2017)
13. Elshae Tanimoto (Summer 2016 – Winter 2017)
14. Amy McKee (Fall 2015)
15. Kyle Logan (Spring 2015 – Spring 2016)
16. Kaitlyn Dorr (Spring 2015)
17. Vandad Mazarei (Winter 2015 – Spring 2015)
18. Sam Gardner (Summer 2014 – Winter 2015)
19. Matthew Kessler (Winter 2014 – Winter 2015)
20. Paul Schroeder (Winter 2014 – Winter 2015)
21. Gabriel Asch (Winter 2014 – Winter 2015)
22. Kristina Milaj (Winter 2014)
23. Nicholas James Mc Elmurry (Fall 2013)
24. Huijing (Sheela) Wang (Fall 2013)
25. Cody Tibbits (Summer 2013 – Winter 2015)
26. Amy Kordosky (Winter 2013)
27. Anthonie Kramer (Spring – Summer 2012)

B3.5. Postdoctoral Trainees

1. Mehrdad Memari, Ph.D. (August 2021 – Present)
2. Mohammad Shafiqal Alam, Ph.D. (June 2019 – November 2021) – Currently a Post-doc at University of Notredame.
3. Sabarethinam Kameshwar, Ph.D. (September 2017 – July 2019) – Currently a faculty member at Louisiana State University.
4. Rajendra Soti, Ph.D. (December 2017 – December 2018) – Currently at Jacobs Engineering in Corvallis, OR.

B3.6. Other Advising

Faculty Advisor, Earthquake Engineering Research Institute student chapter (Winter 2015 – Spring 2018)

Visiting Scholars

1. Fabio Romano, Ph.D., Univ. d. Studi Niccolò Cusano, Italy (Spring & Summer 2018).
2. Leonardo Rodrigues, Ph.D., University of Minho, Portugal (Winter & Spring 2017).
3. Gerald Jaho, MS, University of Genoa, Italy (Fall 2016 – Winter 2017).
4. Emanuele Aldo Mortola, MS, University of Genoa, Italy (Fall 2016 – Winter 2017).
5. Alessandro Rizzi, MS, University of Torino, Italy (Spring 2016 – Summer 2016).
6. Micaela Cappozzo, MS, University of Torino, Italy (Spring 2016 – Summer 2016).
7. Milena Massari, Ph.D., University of Bologna, Italy (Fall 2015 – Spring 2016).
8. Luís Miranda, Visiting Scholar, LNEC, Lisbon, Portugal (Fall 2014).
9. Filipe Ribeiro, Ph.D., Universidade Nova de Lisboa, Portugal (Spring 2013).

Co-advisor of Students Enrolled at Other Institutions:

Ph.D. Students

1. Giuseppe Di Dieco, Ph.D., University of Bristol, United Kingdom (2020 – Present).
2. Dominika Malkowska, Ph.D., University of Bristol, United Kingdom (2019 – Present).
3. Fabio Romano, Ph.D., Univ. degli Studi Niccolò Cusano, Italy (2017 – 2019).
4. Leonardo Rodrigues, Ph.D. Student, University of Minho, Portugal (2015 – 2019).

5. Jamil Haddad, Ph.D., University of Genoa, Italy (2014 – 2018).
6. Luís Miranda, Visiting Ph.D. Student, LNEC, Lisbon, Portugal (2014 – 2018).
7. Milena Massari, Ph.D., University of Bologna, Italy (2014 – 2017).
8. Filipe Ribeiro, Ph.D., Universidade Nova de Lisboa, Portugal (2012 –2017).
9. Eliyar Asgarieh, Ph.D., Tufts University, MA, USA (2012 –2015).

M.S. Students

1. Leiyiming Tao, Ms.c, University of Bristol, United Kingdom (2019 – 2020).
2. Yawang Fan, Ms.c, University of Bristol, United Kingdom (2018-2019).
3. Sam White, M.S., Washington State University (2017 – 2019).
4. Hanshun Yu, M.S., Tufts University, MA, USA (2014 –2016).
5. Ruben Rosario, M.S., Universidade Nova de Lisboa, Portugal (2013 –2014).
6. Filipe Ribeiro, M.S., Universidade Nova de Lisboa, Portugal (2012).
7. Khaled Mashfiq, M.S., Sapienza University of Rome, Italy (2012).

B4. Other Assignments

1. 2021, Technical Director of the COF/COE Research on Engineering, Architecture and Construction of Timber Structures (REACTS) Consortium

C. Scholarship and Creative Activity

C1. Publications

The candidate's role on joint publications is indicated as part of each entry; if nothing has been included, the candidate's involvement was minor. **The candidate should indicate in bold font students for which the candidate serves as a major advisor.**

C1.1. Books & Book Chapters

1. Yeh, H., Barbosa, A.R., and Mason, B. (2022). "Tsunamis Effects in Man-Made Environment." Tilling R.I. (eds) Complexity in Tsunamis, Volcanoes, and their Hazards. *Encyclopedia of Complexity and Systems Science Series*. Springer, New York, NY. https://doi.org/10.1007/978-1-0716-1705-2_623
2. **Rodrigues, L.G.**, Branco, J., Neves, L.A.C., Barbosa, A.R. (2021). "Application of Fragility Analysis to Timber-Framed Structures for Seismic and Robustness Assessments", 18th International Probabilistic Workshop: IPW 2020, Springer Nature.
3. Varum, H., Dumar, R., Furtado, A., Barbosa, A.R, Gautam, D., Rodrigues, H. (2018). "Seismic performance of buildings in Nepal after the Gorkha earthquake." In: Gautam, D., Rodrigues, H. (eds) Impacts and Insights of the Gorkha Earthquake, pp 47-63. DOI: 10.1016/B978-0-12-812808-4.00003-1.
4. **Mohammed, M. A.**, Yu, H., Furtado, A., Barbosa, A. R., Moaveni, B., Varum, H., Rodrigues, H., Vila-Pouca, N., Wood, R. L. (2017). "Post-earthquake Field Measurement-Based System Identification and Finite Element Modeling of an 18-Story Masonry-Infilled RC Building." In: Conte J., Astroza R., Benzoni G., Feltrin G., Loh K., Moaveni B. (eds) *Experimental Vibration Analysis for Civil Structures*. EVACES 2017. Lecture Notes in Civil Engineering, Vol 5. Springer, Cham. DOI:10.1007/978-3-319-67443-8_66.
5. Bose, S., Nozari, A., Mohammadi, M., Stavridis, A., Moaveni, B., Wood, R., Gillins, D., Barbosa, A.R. (2016). "Structural Assessment of a School Building in Sankhu, Nepal Damaged Due to Torsional Response During the 2015 Gorkha Earthquake." *Dynamics of Civil Structures*, edited by Pakzad S., Juan C., Conference Proceedings of the Society for Experimental Mechanics Series (2). Springer International Series, 31-42. DOI: 10.1007/978-3-319-29751-4_5.
6. Yeh, H., Barbosa, A.R., and Mason, B. (2015). "Tsunamis Effects in Man-Made Environment." *Encyclopedia of Complexity and Systems Science*, edited by Meyers, A.R., Springer, Berlin Heidelberg, 1-27. ISBN: 978-3-642-27737-5, 10.1007/978-3-642-27737-5_623-1.
7. **Asgarieh, E.**, Moaveni, B., Nozari, A., Barbosa, A.R., Chatzi, E. (2014). "Nonlinear Identification of a Seven-story Shear Wall Building Based on Numerically Simulated Seismic Data." *Dynamics of Civil Structures*, edited by Fikret Necati Catbas, Conference Proceedings of the Society for Experimental Mechanics Series, Springer International Series, 245-254. DOI: 10.1007/978-3-319-04546-7_28.
8. Faggella, M., Barbosa, A.R., Conte, J.P., Spacone, E., Restrepo, J.I. (2008). "Probabilistic Seismic Response Sensitivity Analysis of 3D Nonlinear Model of R/C Building Structure." *Valutazione e riduzione della vulnerabilita sismica di edifici esistenti in concreto armato*, edited by E. Cosenza, G. Manfredi, G. Monti, Polimetrica International Scientific Publisher Monza/Italy, 331-338. ISBN: 8876991298, 9788876991295.

C1.2. Refereed Journal Publications (84 journal publications)

1. **Khlef, F. L.**, Barbosa, A.R., & Ideker, J. H. (2022). "Validated Uniaxial Stress–Strain Model for Cyclic Analysis of High-Performance Fiber-Reinforced Cementitious Composites." *Journal of Structural Engineering*, 148(9), 04022127.
2. Sanderson, D., Cox, D., Barbosa, A.R., & Bolte, J. (2022). "Modeling regional and local resilience of infrastructure networks following disruptions from natural hazards." *Journal of Infrastructure Systems*, 28(3), 04022021.
3. **Di Dieco, G.D.**, Barbosa, A.R., Pregolato, M. (2022). "A Taxonomy for Flood Hazards Risk and Resilience Management of Riverine Roadway Bridges." *Bridge Engineering, Proceedings of the Institution of Civil Engineers*, <https://doi.org/10.1680/jbren.21.00065>,
4. Stuedlein, A, Huffman, J., Barbosa, A.R., **Belejo, A.** (2022). "Probabilistic Structural System Response to Differential Settlement Resulting from Spatially-Variable Soil." *Journal of Geotechnical and Geoenvironmental Engineering*. 148(2), 04021184.
5. Reis, C., Clain, S., Figueiredo, J., Barbosa, A.R., Baptista, M.A., Lopes, M. (2021). "Experimentally Validated Numerical Models to Assess Tsunami Hydrodynamic Force on an Elevated Structure." Vol. 249, 113280.
6. **Taylor, B.**, Barbosa, A.R., Sinha, A. (2021). "In-plane Shear Cyclic Performance of Spline Cross-Laminated Timber-Concrete Composite Diaphragms." *Journal of Structural Engineering*, 147(10), 04021148-1-14
7. **Bora, S.**, Sinha, A., Barbosa, A.R. (2021). "Effect of Wetting and Redrying on Performance of Cross-Laminated Timber Angle Bracket Connection." *ASCE Journal of Structural Engineering*, 147(6), 04021121-1-15.
8. Duncan, S., Cox, D., Barbosa, A.R., Lomonaco, P., Park, H., **Alam, M.S., Yu, C.** (2021). "Physical Modeling of Progressive Damage and Failure of Wood-Frame Coastal Residential Structures Due to Surge and Wave Forces." *Coastal Engineering*, Vol. 169, 103959
9. **Burns, P.**, Barbosa, A.R. Olsen, M.J., Wang, H. (2020). "Multi-hazard Damage and Loss Assessment of Bridges in a Highway Network Subjected to Earthquake and Tsunami Hazards." *ASCE Natural Hazards Review*, 22(2), 05021002-1-18 DOI: 10.1061/(ASCE)NH.1527-6996.0000429.
10. **Kameshwar, S.**, Park, H. Cox, D., Barbosa, A.R. (2021). "Effect of disaster debris, floodwater pooling duration, and bridge damage on immediate post-tsunami connectivity." *International Journal of Disaster Risk Reduction*." Vol. 56, 102119, DOI: 10.1016/j.ijdr.2021.102119.
11. **Baas, E. J.**, Riggio, M., Barbosa, A.R. (2021). "Structural Health Monitoring Data Collected During Construction of a Mass-Timber Building with a Data Platform for Analysis." *Elsevier Data in Brief*. Vol. 35, DOI: 10.1016/j.dib.2021.106845.
12. **Mugabo, I.**, Barbosa, A.R., Sinha, A.R., Higgins, C., Riggio, M., Pei, S., van de Lindt, J.W., Berman, J.W. (2021). "System Identification of UCSD-NHERI Shake-Table Test of Two-Story Structure with Cross-Laminated Timber Rocking Walls." *ASCE Journal of Structural Engineering*, 147(4) 04021018-1-17, DOI: 10.1061/(ASCE)ST.1943-541X.0002938.
13. Barbosa, A.R., **Rodrigues, L.G.**, Sinha, A., Higgins, C., Zimmerman, R.B, Breneman, S., Pei, S., van de Lindt, J.W., Berman, J., McDonnell, E. (2021). "Shake-table Experimental Testing and Performance of Topped and Un-topped Cross-laminated Timber Diaphragms." *ASCE Journal of Structural Engineering*, 147(4), 04021011-1-16. DOI: 10.1061/(ASCE)ST.1943-541X.0002914.
14. Aghababaei, M., Okamoto, C., Koliou, M., Nagae, T., Pantelides, C.P., Ryan, K.L., Barbosa, A.R., Pei, S., van de Lindt, J.W., Dashti, S. (2021). "Full-Scale Shake Table Test Damage Data Collection Using Terrestrial Laser Scanning Techniques." *ASCE Journal of Structural*

- Engineering, 147(3): 04020356-1-19, DOI: 10.1061/(ASCE)ST.1943-541X.0002905.
15. Shephard, A.B., Fischer, E.C., Barbosa, A.R., Sinha, A. (2021). "Fundamental behavior of timber concrete composite floors in fire." *Journal of Structural Engineering*, 147, (2), 04020340-1-15. DOI: 10.1061/(ASCE)ST.1943-541X.0002890.
 16. **Baas, E.J.**, Riggio, M., Barbosa, A.R. (2021). "A Methodological Approach for Structural Health Monitoring of Mass-Timber Buildings Under Construction." *Construction and Building Materials*. 268, 121153, DOI: 10.1016/j.conbuildmat.2020.121153
 17. **Romano, F., Alam, M.S.**, Faggella, M., Zucconi, M., Barbosa, A.R., Ferracuti, B. (2021). "Model class uncertainty in seismic loss analysis for a code-designed URM infilled RC building." *Bulletin of Earthquake Engng.* 19, 429–462 (2021). DOI: 10.1007/s10518-020-00994-x.
 18. **Soti, R.**, Barbosa, A.R., Stavridis, A. (2020). "Numerical Assessment of URM Infilled RC Frames Retrofitted with Near-Surface Mounted Reinforcing Steel Bars." *Frontiers in Built Environment - Earthquake Engineering*. 6, 197, DOI: 10.3389/fbuil.2020.590302.
 19. Shekhar, K., Winter, A., **Alam, M.S.**, Arduino, P., Miller, G., Motley, M., Eberhard, M., Barbosa, A.R., Lomonaco, P., Cox, D. (2020). "Conceptual Evaluation of Tsunami Debris Field Damming and Impact Forces." *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*, 146(6), DOI: 10.1061/(ASCE)WW.1943-5460.0000600.
 20. **Mahr, K.**, Sinha, A., Barbosa, A.R. (2020). "Elevated Temperature Effects on Performance of a Cross-Laminated Timber Floor-To-Wall Bracket Connections." *ASCE Journal of Structural Engineering*, 146(9), DOI: 10.1061/(ASCE)ST.1943-541X.0002737.
 21. **Taylor, B.**, Barbosa, A.R., Sinha, A. (2020). "Cyclic Performance of In-plane Shear Cross-laminated Timber Panel-to-Panel Surface Spline Connections." *Engineering Structures*, Vol. 218, 110726. DOI: 10.1016/j.engstruct.2020.110726.
 22. van de Lindt, J.W., Walter Gillis Peacock, W.G., Mitrani-Reiser, J., Rosenheim, N., Deniz, D., Dillard, M., Tomiczek, T., Koliou, M., Graettinger, A., Crawford, P.S., Harrison, K., Barbosa, A., Tobin, J., Helgeson, J., Peek, L., Memari, M., Sutley, E. Hamideh, S., Gu, D., Cauffman, S., Fund, J. (2020). "Community Resilience-Focused Technical Investigation of the 2016 Lumberton, North Carolina Flood: An Interdisciplinary Approach." *Natural Hazards Review*, 21(3), 04020029 DOI: 10.1061/(ASCE)NH.1527-6996.0000387.
 23. Winter, A.O., **Alam, M.O.**, Shekhar, K., Motley, M.K., Eberhard, M.O., Barbosa, A.R., Lomonaco, P., Arduino, P., Cox, D.T. (2020). "Tsunami-like Wave Forces on an Elevated Coastal Structure: Effects of Flow Shielding and Channeling." *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*, Vol. 146, No. 4, DOI: 10.1061/(ASCE)WW.1943-5460.0000581.
 24. **Alam, M.S.**, Winter, A., **Galant, G.**, Shekhar, K., Barbosa, A.R., Motley, M., Eberhard, M., Cox, D., Arduino, P., Lomonaco, P. (2020). "Tsunami-like Wave Induced Lateral and Uplift Pressures and Forces on an Elevated Coastal Structure." *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*, Vol. 146, No. 4, DOI: 10.1061/(ASCE)WW.1943-5460.0000562.
 25. **Mahr, K.**, Sinha, A., Barbosa, A.R. (2020). "Experimental Investigation and Modeling of Thermal Effects on a Typical Cross-Laminated Timber Bracket Shear Connection." *ASCE Journal of Materials in Civil Engineering*, Vol. 32, No. 6, pp. 04020111. DOI: 10.1061/(ASCE)MT.1943-5533.000312.
 26. **Buniya, M. K.**, Barbosa, A.R., Sattar, S. (2020). "Assessment of a 12-story Reinforced Concrete Special Moment Frame Building Using Performance-Based Seismic Engineering Standards and Guidelines: ASCE 41, TBI, and LATBSDC." *ACI Sp. Publ*, 339, 134-154.
 27. **Soti, R.**, Abdulrahman, L., Barbosa, A. R., Wood, R. L., Mohammadi, M. E., & Olsen, M. J. (2020). "Case study: Post-earthquake model updating of a heritage pagoda masonry temple

- using AEM and FEM.” *Engineering Structures*, 206, 109950, DOI: 10.1016/j.engstruct.2019.109950.
28. Misra, S., Padgett, J., Barbosa, A.R., Webb, B. (2020). “An Expert Opinion Survey on Post Hazard Restoration of Roadways and Bridges: Data and Key Insights.” *Earthquake Spectra*, Vol. 8755293019891722, pp. 1-22. DOI:10.1177/8755293019891722.
 29. **Ribeiro, F.**, Barbosa, A.R., Neves, L. (2019). “Fragility Assessment of Pre-Northridge Steel Moment Frames using Finite-Length Plastic Hinge Elements and Concentrated Plasticity Fracture Elements.” *Computer Modeling in Engineering and Sciences*, Vol. 120, No. 3, pp. 657-676. DOI:10.32604/cmescs.2019.06296.
 30. **Mohammed, M.A.**, Barbosa, A.R. (2019). “Numerical Modeling Strategy for the Simulation of Nonlinear Response of Slender Reinforced Concrete Structural Walls.” *Computer Modeling in Engineering & Sciences, Special Issue in Advances in OpenSees Applications to Civil Engineering*, Vol. 120, No. 3, pp. 583-627. DOI:10.32604/cmescs.2019.06052.
 31. **Kameshwar, S.**, Cox, D.T., Barbosa, A.R., Farokhnia, K., Park, H., **Alam, M.S.**, van de Lindt, J.W. (2019). “Probabilistic decision-support framework for community resilience: Incorporating multi-hazards, infrastructure interdependencies, and resilience goals in a Bayesian network.” *Reliability Engineering and System Safety*, Vol. 191, pp. 106568.
 32. Blomgren, H.E., Pei, S., Jin, Z., Powers, J., Dolan, J.D., van de Lindt, J.W., Barbosa, A.R., Huang, D. (2019). “Full-Scale Shake Table Testing of Cross-Laminated Timber Rocking Shear Walls with Replaceable Components.” *Journal of Structural Engineering*, 145(10), pp. 04019115.
 33. Stenson, J., Ishaq, S.L., Laguerre, A., Loia, A., MacCrone, G., **Mugabo, I.**, Northcutt, D., Riggio, M., Barbosa, A., Gall, E.T., Van Den Wymelenberg, K. (2019). “Monitored Indoor Environmental Quality of a Mass Timber Office Building: A Case Study.” *Buildings* 2019, 9, 142; DOI:10.3390/buildings9060142.
 34. Attary, N., van de Lindt, J. W., Barbosa, A.R., Cox, D.T., Unnikrishnan, V.U. (2019). “Performance-Based Tsunami Engineering for Risk Assessment of Structures Subjected to Multi-Hazards: Tsunami following Earthquake.” *Journal of Earthquake Engineering*. DOI: 10.1080/13632469.2019.1616335.
 35. **Mugabo, I.**, Barbosa, A.R., Riggio, M. (2019). “Dynamic Characterization and Vibration Analysis of a Four-story Mass Timber Building.” *Front. Built Environ.* Vol. 5, No. 86, pp. 1-16, DOI: 10.3389/fbuil.2019.00086
 36. **Mugabo, I.**, Barbosa, A.R., Riggio, M., Batti, J. (2019). “Ambient Vibration Measurement Data of a Four-story Mass Timber Building.” *Front. Built Environ.* Vol. 5, No. 67, pp. 1-4. DOI: 10.3389/fbuil.2019.00067
 37. **Khlef, F.**, Barbosa, A.R., Ideker, J.H. (2019). “Tension and Cyclic Behavior of High-performance Fiber Reinforced Cementitious Composites.” *ASCE Journal of Materials in Civil Engineering*. Vol. 31, No. 10, pp. 04019220.
 38. **Soti, R.**, Barbosa, A.R. (2019). “Experimental and Applied Element Modeling of Masonry Walls Retrofitted with Near Surface Mounted (NSM) Reinforcing Steel Bars.” *Bulletin of Earthquake Engineering*. Vol. 17, pp. 4081-4114. DOI: 10.1007/s10518-019-00607-2.
 39. Rodrigues, H., Abrahamczyk, L., Barbosa, A.R., Shi, H., Ferreira, T.M. (2019). “Natural Hazards Challenges to Civil Engineering (Editorial).” *Advances in Civil Engineering*. Vol. 2019, No. 4565075, pp. 1-2. DOI: 10.1155/2019/4365075.
 40. **Capozzo, M., Rizzi, A.**, Cimellaro, G. P., Domaneschi, M., Barbosa, A.R., and Cox, D. (2019). “Multi-hazard Resilience Assessment of a Coastal Community to Earthquake and Tsunami.” *Journal of Earthquake and Tsunami*. Vol. 13, No. 2. DOI: 10.1142/S1793431119500088.

41. Pei, S., van de Lindt, J.W., Barbosa, A.R., Berman, J.W., McDonnell, E., Dolan, J.D., Blomgren, H.E., Zimmerman, R.B., Huang, D., Wichman, S. (2019). “Experimental Seismic Response of a Resilient 2-Story Mass-Timber Building with Post-Tensioned Rocking Walls” *Journal of Structural Engineering*, 145(11), pp. 04019120.
42. Park, H., Cox, D., **Alam, M.S.**, Barbosa, A.R., van de Lindt, J. W. (2019). “Probabilistic seismic and tsunami damage analysis (PSTDA) of the Cascadia Subduction Zone applied to Seaside, Oregon.” *Journal of Disaster Risk Reduction* Vol. 35, No. 101076, DOI: 10.1016/j.ijdr.2019.101076.
43. Li, Q., Stuedlein, A.W., and Barbosa, A.R. (2019). “Role of Torsional Shear in Combined Loading of Drilled Shaft Foundations.” *ASCE Journal of Geotechnical and Geoenvironmental Engineering*. Vol. 145, No. 4, pp. 06019001-1-7. DOI: 10.1061/(ASCE)GT.1943-5606.0002039.
44. van de Lindt, J.W., Furley, J., Amini, M.O., Pei, S., Tamagnone, G., Barbosa, A.R., Rammer, D., Line, P., Fragiacom, M., Popovski, M. (2019). “Experimental Seismic Behavior of A Two-Story CLT Platform Building.” *Engineering Structures*, Vol. 183 (15), pp 408-422, DOI: 10.1016/j.engstruct.2018.12.079.
45. Cox, D., Arikawa, T., Barbosa, A.R., et al. (2019). “Hurricanes Irma and Maria post-event survey in US Virgin Islands.” *Coastal Engineering Journal* DOI: 10.1080/21664250.2018.1558920.
46. Schmidt, E., Riggio, M., Barbosa, A.R., **Mugabo, I.** (2019). “Environmental Response of a CLT Floor Panel: Lessons for Moisture Management and Monitoring of Mass Timber Buildings.” *Building and Environment*, Volume 148, 15 January 2019, Pages 609-622.
47. **Carey, T.J.**, Mason, H.B., Barbosa, A.R., Scott, M.H. (2019). “Multi-Hazard Earthquake and Tsunami Effects on Soil-Foundation-Bridge Systems.” *Journal of Bridge Engineering*. DOI: 10.1061/(ASCE)BE.1943-5592.0001353.
48. **Mahdavifar, V.**, Barbosa, A.R., Sinha, A., Gupta, R., Muszynski, L., Pryor, S. (2019). “Hysteretic Response of Metal Connections on Hybrid Cross-laminated Timber Panels.” *Journal of Structural Engineering*. 145 (1) DOI: 10.1061/(ASCE)ST.1943-541X.0002222.
49. Ling, S., Blomgren, H.E., Barbosa, A.R., van de Lindt, J.W., McDonnell, E., Berman, J., Dolan, J.D. (2018). “Full-Scale Shake Table Testing of a Two-Story Mass Timber Building with Resilient Rocking Wall Lateral Systems.” *Wood Design Focus*, Vol. 2, Num. 2, pp 10-22.
50. **Alam, M.S.**, Barbosa, A.R. (2018). “Probabilistic seismic demand assessment accounting for finite element model class uncertainty: Application to a code-designed URM infilled reinforced concrete frame building.” *Earthquake Engineering & Structural Dynamics*, Vol. 47 Issue 15, pp 2901-2920, DOI: 10.1002/eqe.3113.
51. Barbosa, A., Trejo, D., **Nielson, D.** (2018). “Performance of Shear Specimens Reinforced with High Strength Reinforcing Bars.” *ACI Structural Journal*, 115(6), 1529-1539. DOI: 10.14359/51710885
52. Park, H., Cox, D., Barbosa, A.R. (2018). “Probabilistic Tsunami Hazard Assessment (PTHA) for resilience assessment of a coastal community.” *Natural Hazards*. DOI: 10.1007/s11069-018-3460-3
53. Schmidt, E., Riggio, M., Laleicke, P., Barbosa, A.R., van den Wymelenberg, K. (2018). “How monitoring CLT buildings can remove market barriers and support designers in North America: an introduction to preliminary environmental studies.” *Portuguese Journal of Structural Engineering*. Ed. LNEC. Série III. n.o 7. ISSN 2183-8488. 41-48. URL: http://rpee.lnec.pt/Ficheiros/rpee_serieIII_n07/rpee_sIII_n07_pg41_48.pdf.
54. **Mahdavifar, V.**, Sinha, A., Barbosa, A.R., Gupta, R., Muszynski, L. (2018). “Lateral and

- Withdrawal Capacity of Fasteners on Hybrid Cross-Laminated Timber Panels.” ASCE Journal of Materials in Civil Engineering. Vol. 30, Number 9, Pages 04018226, DOI: 10.1061/(ASCE)MT.1943-5533.0002432.
55. Rodrigues, H., Furtado, A., Vila-Pouca, N., Varum, H., Barbosa, A.R. (2018). “Seismic Assessment of a School Building in Nepal and Analysis of Retrofitting Solutions.” International Journal of Civil Engineering, pp 1–17, DOI: 10.1007/s40999-018-0297-9
 56. **Alam, M.S.**, Barbosa, A.R., Scott, M.H., Cox, D.T., van de Lindt, J.W. (2018). “Development of Physics-based Tsunami Fragility Functions considering Structural Member Failures.” ASCE Journal of Structural Engineering. Vol. 144, Issue 3. DOI: 10.1061/(ASCE)ST.1943-541X.0001953.
 57. **Rodrigues, L.G.**, Branco, J.M., Neves, L.A.C, Barbosa, A.R. (2018). “Seismic Assessment of a Heavy-Timber Frame Structure with Ring-doweled Moment-Resisting Connections.” Bulletin of Earthquake Engineering, Volume 16, Issue 3, pp 1341–1371 DOI: 10.1007/s10518-017-0247-y.
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79. **Ribeiro, F.L.A.**, Barbosa, A.R., and Neves, L.A.C. (2014). "Application of Reliability-Based Robustness Assessment of Steel Moment Resisting Frame Structures under Post-Mainshock Cascading Events." *ASCE Journal of Structural Engineering*. 140 (8), Special Issue: Computational Simulation in Structural Engineering, A4014008. DOI: 10.1061/(ASCE)ST.1943-541X.0000939.
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84. Castro, L.M.S.S. and Barbosa, A.R. (2006). "Implementation of a Hybrid-Mixed Stress Model based on the use of Wavelets." *Computers and Structures*, 84(10-11), 718-731. DOI: 10.1016/j.compstruc.2005.11.012.

C1.3. Peer-Reviewed Archival Conference Publications

The following papers appeared in archival proceedings that were distributed to libraries (the next section covers other types of proceedings). The acceptance rate is indicated as part of the entry whenever the selection process was rigorous.

1. Longman, R.P., **Baas, E.J.**, Riggio, M., Muszynski, L., Barbosa, A.R., Granello, G., Nairn, J. (2021). "Numerical Modelling of In-Plane Creep Behavior of Post-Tensioned Mass Timber Wall Panels." World Conference on Timber Engineering, Santiago, Chile, 9-12 August 2021.
2. **Baas, E.J.**, Granello, G., Barbosa, A.R., Riggio, M. (2021). "Post-Tensioned Timber Wall Buildings: Design & Construction Practice in New Zealand & United States." World Conference on Timber Engineering, Santiago, Chile, 9-12 August 2021.
3. Fischer, E. C., Shephard, A. B., Sinha, A., Barbosa, A. R. (2020). Design of timber-concrete composite floors for fire (pp. 852-858). Proceedings of the 11th International Conference on Structures in Fire (SiF2020), Brisbane, Queensland.
4. Lomonaco, P., Barbosa, A., Cox, D., Johnson, T., Keen, A., Kennedy, A., ... & Shin, S. (2020). "Loading and structural response of developed shorelines under waves, surge, and tsunami overland flow hazards." *Coastal Engineering Proceedings*, (36v), 36-36.
5. **Baas, E.**, Riggio, M., Barbosa, A.R., **Mugabo, I.**, Schmidt, E. (2019). "Living Lab at Peavy Hall: Structural Health Monitoring of Mass Timber Buildings." SHATiS, International Conference on Structural Health Assessment of Timber Structures, Guimarães, Portugal.
6. **Romano, F.**, **Alam, M. S.**, Faggella, M., Zucconi, M., Barbosa, A. R., Ferracuti, B. (2019). Seismic loss analysis of a modern RC building accounting for uncertainty of infill strut modeling parameters. In Proceedings: Compdyn 2019 - 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering at: 24-26 June 2019, Crete, Greece.
7. **Alam, M. S.**, Barbosa, A. R., Scott, M. H., Cox, D. T., & van de Lindt, J. W. (2019). "Multi-hazard Earthquake-Tsunami Structural Fragility Assessment Framework.", 13th International Conference on Application of Statistics and Probability in Civil Engineering, ICASP13, May 26-30, 2019, Seoul, South Korea.
8. **Rodrigues, L.**, Neves, L.A.C., Barbosa, A.R., Branco, J. M. (2018). "Fragility Analysis of a Mass-Timber Frame Structure with Ring-Doweled Moment-Resisting Connections." World Conference on Timber Engineering, Seoul, Republic of Korea.

9. van de Lindt, J.W., Amini, M.O., Furley, J., Pei, S., Tamagnone, G., Barbosa, A.R., Line, P., Rammer, D., Fragiaco, M. (2018). "Experimental Seismic Behavior of a Two-Story CLT Platform Building: Shake Table Testing Results." World Conference on Timber Engineering, Seoul, Republic of Korea.
10. Schmidt, E.L., Riggio, M., Barbosa, A.R., **Mugabo, I.**, Paul, F.L. (2018). "Moisture response of a full-scale cross laminated timber panel during environmental simulation: key factors in design and management." World Conference on Timber Engineering, Seoul, Republic of Korea.
11. **Mugabo, I.**, Barbosa, A.R., Riggio, M. (2018). "Modal Identification Study of a Four-story Mass-timber Building." World Conference on Timber Engineering, Seoul, Republic of Korea.
12. Pei, S., van de Lindt, J.W., Barbosa, A.R., Berman, J., McDonnell, E., Dolan, J., Zimmerman, R.B., Sause, R., Ricles, J., Ryan, K. (2018). "Full-Scale Shake Table Test of Mass-Timber Building with Resilient Post-Tensioned Rocking Walls." World Conference on Timber Engineering, Seoul, Republic of Korea.
13. Cappozzo, M., Rizzi, A., Cimellaro, G.P., Barbosa, A.R., Cox, D. (2017). "Earthquake and Tsunami Resiliency Assessment for a Coastal Community in the Pacific Northwest, USA." *ASCE Structures Congress 2017*, ASCE, Denver, Colorado, 122-133. DOI: <https://doi.org/10.1061/9780784480427.011>
14. Bose, S., Nozari, A., Mohammadi, M., Stavridis, A., Moaveni, B., Wood, R., Gillins, D., Barbosa, A.R. (2016). "Structural Assessment of a School Building in Sankhu, Nepal Damaged Due to Torsional Response During the 2015 Gorkha Earthquake." *IMAC XXXIV A Conference and Exposition on Structural Dynamics*, Society for Experimental Mechanics, Orlando, FL, 12pp.
15. Asgari, E., Moaveni, B., Nozari, A., Barbosa, A.R., Chatzi, E. (2014). "Nonlinear Identification of a Seven-story Shear Wall Building Based on Numerically Simulated Seismic Data." *IMAC XXXII, A Conference and Exposition on Structural Dynamics*, Society for Experimental Mechanics, Dynamics of Civil Structures, Vol. 4, pp 245-254, Orlando, FL.
16. Yeh, H. Barbosa, A.R., Ko, H., and **Cawley, J.** (2014). "Tsunami Loadings on Structures: Review and Analysis." *34th International Conference of Coastal Engineering*, Coastal Engineering Research Council of the COPRI of the American Society of Civil Engineers Seoul, Korea, 13pp. DOI: <https://doi.org/10.9753/icce.v34.currents.4>
17. Barbosa, A.R., Gambatese, J., **Das, A.**, Pestana, A.C. (2014). "Mapped Workflow for Safety and Reliability Assessments of Use and Re-use of Formwork." *Construction Research Congress 2014*, ASCE, Atlanta, Georgia, 1821-1830. DOI: 10.1061/9780784413517.186.
18. **Ribeiro, F.L.A.**, Barbosa, A.R., and Neves, L.A.C. (2013). "Reliability-Based Robustness Assessment of Structures Subjected to Post-Mainshock Hazard Events." *11th International Conference on Structural Safety & Reliability (ICOSSAR)*, The International Association for Structural Safety and Reliability, New York, U.S.A., 8pp.
19. Barbosa, A. R., Panagiotou, M., Conte, J.P., and Restrepo, J.I., (2009). "Comparison of Dynamic Strut-and Tie and Fiber Beam-Column Models for the UCSD Seven-Story Full-scale Building Slice Test." *Sixth International Conference on Urban Earthquake Engineering*, The Center for Urban Earthquake Engineering, Tokyo.
20. Moaveni, B., Barbosa, A.R., Panagiotou, M., Conte, J.P., and Restrepo, J.I. (2009). "Uncertainty Analysis of Identified Damping Ratios in Nonlinear Dynamic Systems." *27th International Modal Analysis Conference (IMAC-XXVII)*, Society for Experimental Mechanics, Orlando, Florida, USA, 14pp.

21. Moaveni, B., Barbosa, A.R., Conte, J. P., and Hemez, F. M. (2007). “Uncertainty Analysis of Modal Parameters Obtained From Three System Identification Methods.” *25th International Modal Analysis Conference (IMAC-XXV)*, Society for Experimental Mechanics, Orlando, Florida, USA, 12pp.

C1.4. Other Peer-Reviewed Publications

The following papers appeared in proceedings that were distributed primarily to attendees (as CDs, printed volumes, availability through a public website, etc.).

1. **Belejo, A.**, Barbosa, A.R., Bento, R. (2020). “Ground motion duration assessment of a plan-asymmetric reinforced concrete building.” Proceedings of the 9th European Workshop on the Seismic behaviour of Irregular and Complex Structures, Lisbon, Portugal. Online Workshop, 15-16 December 2020. ISBN: 978-989-33-1269-8.
2. Schmidt E.L., Riggio M., Laleicke P.F., Barbosa A.R., Van Den Wymelenberg K. (2017). “How monitoring CLT buildings can remove market barriers and support designers in North America: an introduction to preliminary environmental studies.” II Congresso Latinoamericano de Estruturas de Madera, CLEM+CIMAD, Buenos Aires, Argentina, 11pp.
3. Wood, R. L., Mohammadi, M.E., Barbosa, A.R., Kawan, C.K., Shakya, M., Olsen, M.J. (2017). “Structural Damage Assessment of a Five-Tiered Pagoda Style Temple in Nepal.” Proceedings of the 16th World Conference on Earthquake Engineering, The International Association for Earthquake Engineering, Santiago, Chile, 12pp.
4. Yu, H., Levine, A., Van Oss, T., Mohammed, M., Moaveni, B., Barbosa, A.R., Stavridis, A. (2017). “System Identification and Modeling of an 18-Story Building in Nepal Using Post-Earthquake Ambient Vibration Data.” Proceedings of the 16th World Conference on Earthquake Engineering, The International Association for Earthquake Engineering, Santiago, Chile, 12pp.
5. Miranda, L., Barbosa, A.R., Serra, J., Caldeira, L. (2017). “Parameter Sensitivity Analysis of the Manzari-Dafalias Model for Modeling the Cyclic Response of a Sand.” Proceedings of the 16th World Conference on Earthquake Engineering, The International Association for Earthquake Engineering, Santiago, Chile, 12pp.
6. **Lostra, M.**, Higgins, C., Barbosa, A.R. (2016). “Seismic Retrofit of Reinforced Concrete Rectangular Bridge Columns Using Titanium Alloy Bars.” *XII International Conference on Structural Repair and Rehabilitation*, Instituto da Construção, Porto, Portugal.
7. Sa, P., Rodrigues, H., Furtado, A.F., Varum, H., Vila-Pouca, N., Barbosa, A.R. (2016). “Evaluation of the Seismic Vulnerability of a School Building in Nepal – Proposal for Retrofit Solutions.” (in Portuguese), *Betão Estrutural 2016*, GPBE and DCUC, Coimbra, Portugal.
8. Sa, P., Rodrigues, H., Furtado, A.F., Varum, H., Vila-Pouca, N., Barbosa, A.R. (2016). “Numerical Study on the Seismic Vulnerability of a School Building with a Proposed Retrofit Solution” (in Portuguese), *XII International Conference on Structural Repair and Rehabilitation*, Instituto da Construção, Porto, Portugal.
9. **Mahdavifar, V.**, Barbosa, A.R., Sinha, A. (2016). “Nonlinear Layered Modeling Approach for Cross Laminated Timber Panels Subjected to Out-of-Plane Loading.” *41st IAHS World Congress on Sustainability and Innovation for the Future*, The International Association for Housing Science, Albufeira, Algarve, Portugal, 10pp.

10. **Mahdavifar, V.**, Barbosa, A.R., Sinha, A., Gupta, R., Muszyński, L. (2016). “Hysteretic behavior of metal connectors for hybrid (high- and low-grade mixed species) cross-laminated timber.” World Conference of Timber Engineering, WCTE, Vienna, Austria, 8pp.
11. Varum, H., Pouca, N., Rodrigues, H., Furtado, A., Oliveira, J., Arêde, A., Barbosa, A. (2016). “Infilled RC Structures Performance in the 25th April, 2015 Gorkha Nepal Earthquake: Observations and Dynamic Characterization Tests.” 16th International Brick and Block Masonry Conference, IBMAC, Padova, Italy.
12. Varum, H., Arêde, A., Rodrigues, H., Pouca, N.V., Oliveira, J., Furtado, A., Barbosa, A. (2016). “Earthquake in Nepal 2015: Lessons Learnt from the Behavior and Damage Observed in Buildings.” Congreso Euro - Americano Rehabend 2016, Patología de la Construcción, Tecnología de la Rehabilitación y Gestión del Patrimonio, Burgos, Spain, 8pp.
13. **Ribeiro, F.**, Barbosa, A.R., Neves, L. (2016). “Fragility and Loss Assessment of Pre-Northridge Steel Moment Frames Using the Opensees Framework.” 10° National Congress of Seismology and Earthquake Engineering, The Earthquake Engineering Research Institute, Portugal, 11pp.
14. **Ribeiro, F.**, Rosario, R., Barbosa, A.R., Neves, L. (2016). “Sensitivity Analysis of Steel Moment Frames Subjected to Structural Fire Using the Opensees Framework.” 10° National Congress of Seismology and Earthquake Engineering, The Earthquake Engineering Research Institute Portugal, 10pp.
15. Varum, H., Barbosa, A.R., Arêde, A., Pouca, N., Rodrigues, H., Furtado, A., Mário, J. (2016). “April 2015 Gorkha earthquake in Nepal: field observations.” 10° National Congress of Seismology and Earthquake Engineering, The Earthquake Engineering Research Institute Portugal, 12pp.
16. Brando G., Rapone, D., Spacone, E., Barbosa, A.R., Olsen, M., Gillins, D., **Soti, R.**, Varum, H., Arêde, A., Vila-Pouca, N., Furtado, A., Oliveira, J., Rodrigues, H., Stavridis, A., Bose, S., Fagella, M., Gigliotti, R., Wood, R. (2015). “Reconnaissance report on the 2015 Gorkha Earthquake effects in Nepal.” XVI Convegno ANIDIS, ANIDIS, L’Aquila, Italy, 20pp.
17. Barbosa, A. R., **Ribeiro, F.L.A.**, Neves, L.C.A. (2014). “Effects of Earthquake Ground-motion Duration on the Response of a 9-story Steel Moment Resisting Frame.” Tenth National Conference on Earthquake Engineering, The Earthquake Engineering Research Institute, Anchorage, Alaska, 11pp.
18. **Ramadhan, G.**, Barbosa, A. R. (2014). “Improving the Seismic Performance of Diagrid Steel Structures using Friction Mass Dampers.” Tenth National Conference on Earthquake Engineering, The Earthquake Engineering Research Institute, Anchorage, Alaska, 11pp.
19. **Carey, T.**, Mason, H. B., Barbosa, A. R., and Scott, M. H. (2014). “Modeling framework for soil-bridge system response during sequential earthquake and tsunami loading.” Tenth National Conference on Earthquake Engineering, The Earthquake Engineering Research Institute Anchorage, Alaska, 11pp.
20. **Romney, K.T.**, Barbosa, A. R., and Mason, H. B. (2014). “Developing a soil bridge-interaction model for studying the effects of long-duration earthquake motions.” Tenth National Conference on Earthquake Engineering, The Earthquake Engineering Research Institute, The Earthquake Engineering Research Institute, Anchorage, Alaska, 11pp.
21. **Soti, R.**, Barbosa, A. R., and Stavridis, A. (2014). “Numerical Modeling of URM Infill Walls Retrofitted with Embedded Reinforcing Steel. Tenth National Conference on Earthquake Engineering, The Earthquake Engineering Research Institute, Anchorage, Alaska, 11pp.

22. Barbosa, A.R., Neves, L.A.C. and **Ribeiro, F.L.A.** (2012). "Preliminary Proposal for Performance-Based Structural Engineering for Fire Following Earthquake." First International Conference on Performance-Based and Life-Cycle Structural Engineering (PLSE 2012), Centre for Infrastructure Engineering and Safety, Hong Kong, China, 8pp.
23. **Ribeiro, F.L.A.**, Barbosa, A.R., and Neves, L.A.C. (2012). "Robustness Assessment for Consecutive Seismic Events." 4^o Encontro Nacional de Risco, Segurança e Fiabilidade, European Safety and Reliability Association, Lisboa, Portugal.
24. **Ribeiro, F.L.A.**, Barbosa, A.R., and Neves, L.A.C. (2012). "Seismic Robustness Assessment of Code Compliant Steel Moment Resisting Frame under Seismic Triggered Sequences of Events." 15th World Conference on Earthquake Engineering (15WCEE), The International Association of Earthquake Engineering Lisbon, Portugal, 10pp.
25. Faggella, M., Barbosa, A. R., Conte, J. P., Spacone, E, and Restrepo, J.I. (2009). "Use of High-Performance Computing for Probabilistic Seismic Response Sensitivity Analyses of a Building Structure." First International Conference on Parallel, Distributed and Grid Computing for Engineering, edited by Topping, B.H.V. and Iványi, P., IEEE, Civil-Comp Press, Stirlingshire, UK, 10pp. DOI:10.4203/ccp.90
26. Faggella, M., Barbosa, A.R., Conte, J. P., Spacone, E, and Restrepo, J.I. (2008). "Seismic Assessment of R/C Building Structure through Nonlinear Probabilistic Analysis with High-performance Computing." Seismic Engineering International Conference, MERCEA08, Reggio Calabria, Italy.
27. Barbosa, A.R. and Silva, M.A.G. (2007). "Bridge Abutment Interaction under Seismic Loading." 2nd International Conference on Structural Condition Assessment, Monitoring and Improvement, SCAMI-2, Changsha, China, 6pp.
28. Barbosa, A.R., Caldeira, L., and Silva, M.A.G. (2007). "Modelação Numérica de Pontes Incluindo Interação Encontro-Superestrutura." (in Portuguese) *7th Congresso de Sismologia e Engenharia Sísmica*, Sociedade Portuguesa de Engenharia Sísmica, Porto, Portugal
29. Silva, M., Barbosa, A.R., Pereira, E., Castro. L. (2005). "Utilização de um Modelo Híbrido-Misto na Análise Dinâmica de Estruturas Reticuladas Planas." (in Portuguese) *Métodos Numéricos en Ingeniería, SEMNI and APMTAC*, Granada, Spain
30. Castro, L.M.S.S. and Barbosa, A.R. (2003). "Resolução de Problemas de Elasticidade com Wavelets no Intervalo." (In Portuguese) VII Encontro Nacional de Mecânica Aplicada e Computacional, APMTAC, Évora, Portugal.
31. Castro, L.M.S.S. and Barbosa, A.R. (2003). "Implementation of a Hybrid-Mixed Stress Model Based on the Use of Wavelets." *IX International Conference on Civil and Structural Engineering Computing*, CC2003 (Civil-Comp press), Egmond an Zee, Netherlands, 20pp. DOI:10.4203/ccp.77.41.

C1.5. Other Publications

1. Alam, M., Simpson, B., Barbosa, A.R. (2020). "Defining Appropriate Fragility Functions for Oregon." A report for the Cascadia Lifeline Program, Corvallis, Oregon.
2. Higgins, C., Barbosa, A.R., Shrestha, S., Lostra, M., Belejo, A. (2019). "Seismic Retrofits for Square Reinforced Concrete Columns using Titanium Alloy Bars." Report SPR-784 Oregon Department of Transportation, Salem, Oregon.
3. van de Lindt, J.W., W. G. Peacock, J. Mitrani-Reiser, N. Rosenheim, D. Deniz, M. Dillard, T. Tomiczek, M. Koliou, A. Graettinger, S. Crawford, K. Harrison, A. Barbosa, J. Tobin, J. Helgeson, L. Peek, M. Memari, E. Sutley, D. Gu, S. Cauffman, and J. Fung.

- (2018). Community Resilience-Focused Technical Investigation of the 2016 Lumberton, North Carolina Flood: Multi-Disciplinary Approach. van de Lindt, J.W., W. G. Peacock, and J. Mitrani-Reiser (eds). National Institute of Standards and Technology (NIST SP 1230). doi.org/10.6028.NIST.SP.1230.
4. Barbosa A.R., Sinha A., Higgins C., and Soti R (2018). "Structural Testing for the DR Johnson's CLT Panels". School of Civil and Construction Engineering, College of Engineering, Oregon State University.
 5. Higgins, C., Barbosa, A.R., Blank, C. (2017). "Structural Tests of Concrete Composite-Cross-Laminated Timber Floors Final Report." Report No. 17-01. <http://bit.ly/2AxDRkn>. Structural Engineering Research Laboratory, School of Civil and Construction Engineering, Oregon State University.
 6. Barbosa, A. R., Trejo, D., **Nielson, D.**, Tibbits, C., and Mazerei, V. (2017). "High-strength Reinforcing Steel Bars: Low-cycle Fatigue Behavior." Report SRP 762-B, Oregon Department of Transportation, Salem, Oregon.
 7. Barbosa, A. R., Trejo, D., **Nielson, D.** (2017). "High-strength Reinforcing Steel Bars: Concrete Shear Friction." Report SRP 762-A, Oregon Department of Transportation, Salem, Oregon.
 8. Stuedlein, A. W., Barbosa, A. R., Li, Q. (2016). "Evaluation of Torsional Load Transfer for Drilled Shaft Foundations." Report SRP 304-701, FHWA-OR-RD-16-14, Oregon Department of Transportation, , Salem, Oregon, and Federal Highway Administration.
 9. Olsen, M.J., Barbosa, A.R., Burns, P., Kashani, A., Wang, H., Veletzos, M., Chen, Z., Roe, G., Tabrizi, K. (2016). "Guidelines for Development of Smart Apps for Assessing, Coding, and Marking Highway Structures in Emergency Situations." Guidebook for NCHRP Project 14-29. Web Document 223.
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 12. Trejo, D., Barbosa, A., and Link, T. (2014). "Seismic Performance of Circular Reinforced Concrete Bridge Columns Constructed with Grade 80 Reinforcement." Report SRS 500-610, Oregon Department of Transportation, Salem, Oregon.
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 14. Barbosa, A. R., Mason, H. B., and Romney, K. T. (2014). "SSI-Bridge: Soil-Bridge Interaction during Long-Duration Earthquake Motions." Report No. 2012-OSU-0008. Pacific Northwest Transportation Consortium (PacTrans), Seattle, Washington.
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 16. Schotanus, M., Almufti, I., Barbosa, A., Bray, J. Dawson, T., Marrow, J. Mieler, M., Scawthorn, C., Yashinsky, M. (2014). "M 6.0 South Napa Earthquake of August 24,

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17. Trejo, D., Barbosa, A. R., Link, T. (2014). “Seismic Performance of Reinforced Concrete Bridge Columns Constructed with Grade 80 Reinforcement.” Report FHWA-OR-RD-15-02, SRS 500-610, Oregon Department of Transportation, Salem, Oregon.
 18. Gambatese, J., Barbosa, A.R., Das, A. (2014). “Use and Re-use of Formwork: Safety Risks and Reliability Assessment.” Report No. 13-2-PS, CPWR, Silver Spring, MD.
 19. Sinha, A., Muszynski, L., Barbosa, A., Kramer, A. and Clauson, M. (2013): Evaluation of SmartLam CLT Rig Mats. Report # 2013-1003, for SmartLam LLC, October 2013: 16pp.
 20. Panagiotou, M., Geonwoo, K., Barbosa, A.R., and Restrepo, J.I. (2008). “Response Verification of a Reinforced Concrete Bearing Wall Building Located in an Area of High Seismic Hazard.” SSRP Report 2008/05. UCSD - Department of Structural Engineering, La Jolla, California.
 21. Gu Q., Barbosa, A.R., Conte, J.P. (2008). “OpenSees Tutorial for UCSD -SE 207: Nonlinear Structural Analysis.”
 22. Panagiotou, M., Geonwoo, K., Barbosa, A.R., and Restrepo, J.I. (2007). “Response Verification of a Reinforced Concrete Bearing Wall Building Located in an Area of High Seismic Hazard.” Report No. SN2961, Portland Cement Association, Skokie, Illinois.
 23. Barbosa, A.R., (2000). “Introduction to SAP2000.” Text provided in support of training on SAP2000, Instituto Superior Técnico, (in Portuguese), Universidade Técnica de Lisboa.

C2. Professional Meetings, Symposia, and Conferences

C2.1. Presentations to Professional Groups (includes presentations of papers cited in C1.3)

1. Contributed Talk, “Numerical Modelling of In-Plane Creep Behavior of Post-Tensioned Mass Timber Wall Panels.” World Conference on Timber Engineering, Santiago, Chile, 9-12 August 2021 (Presented by co-advised M.S. student Ryan Longman).
2. Contributed Talk, “Post-Tensioned Timber Wall Buildings: Design & Construction Practice in New Zealand & United States.” World Conference on Timber Engineering, Santiago, Chile, 9-12 August 2021. (Presented by co-advised Ph.D. student Esther Baas)
3. Contributed Talk, “Ground motion duration assessment of a plan-asymmetric reinforced concrete building.” Proceedings of the 9th European Workshop on the Seismic behaviour of Irregular and Complex Structures, Lisbon, Portugal. Online Workshop, 15-16 December 2020. (Presented by Andre Belejo)
4. Contributed Talk, “Design of timber-concrete composite floors for fire.” Proceedings of the 11th International Conference on Structures in Fire (SiF2020), 2020, Brisbane, Queensland (Presented by Erica Fischer)
5. Contributed Talk, “Loading and structural response of developed shorelines under waves, surge, and tsunami overland flow hazards.” 2020 Coastal Engineering Proceedings. (Presented by Pedro Lomonaco)
6. Contributed Talk, “Living Lab at Peavy Hall: Structural Health Monitoring of Mass Timber Buildings.” SHATiS, International Conference on Structural Health Assessment of Timber Structures, Guimarães, Portugal, July 2019 (Presented by Ph.D. student Esther Baas)
7. Contributed Talk, “Living Lab at Peavy Hall: Structural Health Monitoring of Mass Timber Buildings.” SHATiS, International Conference on Structural Health Assessment of Timber Structures, Guimarães, Portugal, July 2019 (Presented by Ph.D. student Esther Baas)
8. Contributed Talk, “Seismic loss analysis of a modern RC building accounting for uncertainty of infill strut modeling parameters.” In Proceedings: Compdyn 2019 - 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering at: 24-26 June 2019, Crete, Greece. (Presented by Ph.D. student Fabio Romano)
9. Contributed Talk, “Multi-hazard Earthquake-Tsunami Structural Fragility Assessment Framework.”, 13th International Conference on Application of Statistics and Probability in Civil Engineering, ICASP13, May 26-30, 2019, Seoul, South Korea. (Presented by Michael Scott)
10. Contributed Talk, “Fragility Analysis of a Mass-Timber Frame Structure with Ring-Doweled Moment-Resisting Connections.” World Conference on Timber Engineering, Seoul, Republic of Korea, August 2018.
11. Contributed Talk, “Experimental Seismic Behavior of a Two-Story CLT Platform Building: Shake Table Testing Results.” World Conference on Timber Engineering, Seoul, Republic of Korea. August 2018. (Presented by John van de Lindt)
12. Contributed Talk, “Moisture response of a full-scale cross laminated timber panel during environmental simulation: key factors in design and management.” World Conference on Timber Engineering, Seoul, Republic of Korea. (Presented by Evan Schmidt)
13. Contributed Talk, “Modal Identification Study of a Four-story Mass-timber Building.” World Conference on Timber Engineering, Seoul, Republic of Korea

14. Contributed Talk, “Full-Scale Shake Table Test of Mass-Timber Building with Resilient Post-Tensioned Rocking Walls.” World Conference on Timber Engineering, Seoul, Republic of Korea. (Presented by Shiling Pei)
15. Invited Talk, “Seminar Lessons Learned – 2017 Mexico City Earthquake – Performance of Critical Buildings (Schools, Hospitals).” Oregon State University, February 1, 2018, Corvallis, Oregon, USA.
16. Contributed Talk, “Fire Performance of Cross-Laminated Timber-Concrete Composite Floors.” TallWood Design Institute, January 16, 2018, Oregon, USA.
17. Invited Talk, “2017 Mexico Earthquakes Preliminary Lessons Learnt on Infrastructure Resilience.” January 4, 2018. University of Lisbon, Portugal.
18. Invited Talk, *NSF NHERI Coastal Hazards Engineering New User Workshop*, “NHERI UCSD Shake Table User Case Study.” July 20, 2017, Corvallis, OR, USA.
19. Contributed Talk, *Center for Risk-based Community Resilience Planning*, “Multi-Hazard Damage and Loss Estimation: Application to Seaside, OR.” NIST CORE Meeting, April, 2017, Colorado State University, Fort Collins, Colorado.
20. Contributed Talk, *ASCE Structures Congress 2017*, “Earthquake and Tsunami Resiliency Assessment for a Coastal Community in the Pacific Northwest, USA.” SEI Structures Congress, April 6 - 8, 2017, Denver, Colorado.
21. Poster, *Center for Risk-based Community Resilience Planning*. “A Probabilistic Framework for Seismic and Tsunami Hazard Analysis (PSTHA): Application to the City of Seaside, OR, Conditional on A Megathrust Rupture of the Cascadia Subduction Zone.” April 27-28, 2017, Fort Collins, CO.
22. Poster, *EERI Annual Meeting 2017*. “Probabilistic seismic and tsunami hazard analysis (PSTHA) conditional on a megathrust rupture of the Cascadia Subduction Zone.” March 7-10, 2017, Portland, OR.
23. Invited Talk, *1st International Workshop on Resilience*, “Earthquake and Tsunami Fragility Surfaces for a Masonry Infilled Concrete Building.” September 20-22, 2016, Torino, Italy.
24. Contributed Talk, *XII International Conference on Structural Repair and Rehabilitation*, “Seismic Performance of Square Reinforced Concrete Columns Retrofitted with Titanium Alloy Bars,” CINPAR 2016, October 26-28, 2016, Porto, Portugal.
25. Invited Talk, *Cascadia Lifelines Program*, “Cost-effective Retrofitting of Unreinforced Masonry Walls.” Meeting with DOGAMI, September 26, 2016, Corvallis Oregon.
26. Contributed Talk, *41st IAHS World Congress*, “Nonlinear Layered Modeling Approach for Cross Laminated Timber Panels Subjected to Out-Of-Plane Loading.” IAHS World Congress on Sustainability and Innovation for the Future, Sept. 13-16, 2016, Albufeira, Portugal.
27. Contributed Talk, *2016 WCTE World Conference*, “Hysteretic Behavior of Metal Connectors for Hybrid (High- and Low-grade Mixed Species) Cross Laminated Timber.” World Conference in Timber Engineering, August 25, 2016, Vienna, Austria. (Presented by Ph.D. student Vahid Mahdaviifar).
28. Contributed Talk, *2016 Engineering Short Course on Cascadia Resilience*, “Seismic Robustness and Resilience of Existing Built Environment.” Oregon State University, July 14, 2016, Corvallis, Oregon.
29. Contributed Talk, *2016 Summer REU Program Kick-off Workshop*, “Multi-Hazard Damage and Loss Estimates to Buildings and Lifelines.” Oregon State University, June 20, 2016, Corvallis, Oregon.

30. Contributed Talk, *2016 ADSC Faculty Workshop*, “Full Scale Response and Numerical Simulation of Traffic Sign and Signal Foundations Subjected to Torsional (Wind) Loading.” ADSC, June 8, 2016, Chattanooga, Tennessee. (Presented by Armin Stuedlein).
31. Contributed Talk, *EMI 2016 Conference*, “Structural Identification and Modeling of a Three-Story School Building Damaged During the 2015 Gorkha Earthquake.” Engineering Mechanics Institute, ASCE, May 22-25, 2016, Nashville, Tennessee. (Presented by Babak Moaveni).
32. Contributed Talk, *EMI 2016 Conference*, “Modeling Infill Strut Model Class Uncertainty on Seismic Response of Reinforced Concrete Masonry Infilled Frames,” Engineering Mechanics Institute, May 22-25, 2016, Nashville, Tennessee. (Presented by Ph.D. student M. Shafiqul Alam).
33. Contributed Talk, *Mass-timber Conference*, “Composite Timber Structures.” Forest Business Network, March 23, 2016, Portland, Oregon. (Presented by Benton Johnson, SOM).
34. Contributed Talk, *2016 Northwest Transportation Conference*, “Full Scale Response and Numerical Simulation of Traffic Sign and Signal Foundations Subjected to Torsional (Wind) Loading.” NWTC, March 16, 2016, Corvallis, Oregon. (Presented by Armin Stuedlein).
35. Contributed Talk, *Meeting on Opportunities for University of Hawaii – Oregon State University Collaborations*, “Engineering Resilient Coastal Communities.” Oregon State University, February 18, 2016, Corvallis, Oregon.
36. Contributed Talk, *Geo-Structures 2016*, “Soil-Bridge Modeling in OpenSees Considering Long Duration Earthquake Motions and Soil Liquefaction.” *Geotechnical & Structural Engineering Congress*, February 14-17, 2016, Phoenix, Arizona. (Presented by Ben Mason).
37. Invited Panelist, *Geo-Structures 2016*, “Post-Earthquake Reconnaissance Findings from The M7.8 Gorkha Earthquake, Presentation on Remote sensing and laser scanning.” *Geotechnical & Structural Engineering Congress*, February 14-17, 2016, Phoenix, Arizona. (Presented by Daniel Gillins).
38. Contributed Talk, *Geo-Structures 2016*, “Simulation Framework for Reliability-based Serviceability Assessments of Multi-story Steel-framed Structures Supported on Spatially-variable Soil.” *Geotechnical & Structural Engineering Congress*, February 14-17, 2016, Phoenix, Arizona. (Presented by Armin Stuedlein).
39. Invited Talk, *DCA Meeting at the City of Corvallis*, “Lessons Learnt from Recent Earthquakes and Implications for Oregon.” Oregon State University and Corvallis Seismic Strategies, February 3, 2016, Corvallis, Oregon.
40. Contributed Talk, *IMAC XXXIV A Conference and Exposition on Structural Dynamics*, “Structural Assessment of a School Building in Sankhu, Nepal Damaged Due to Torsional Response During the 2015 Gorkha Earthquake.” Society for Experimental Mechanics, January 25-28, 2016, Orlando, Florida. (Presented by Supratik Bose).
41. Contributed Talk, *ATC-SEI Conference*, “Performance of URM Walls and Infilled RC Frame Retrofitted with Near Surface Mounted Steel Bars.” 2nd Conference on Improving the Seismic Performance of Existing Buildings and Other Structures, December 10-12, 2015, San Francisco, California. (Presented by Ph.D. student Rajendra Soti).
42. Invited Talk, *Mayor of City of Corvallis*, “Lessons Learnt from Recent Earthquakes and Implications for Oregon.” Oregon State University and Corvallis Seismic Strategies, October 27, 2015, Corvallis, Oregon.
43. Invited Talk, *Special Seminar*, “Earthquake and Tsunami Loss Assessment.” Oregon State University, October 27, 2015, Corvallis, Oregon.

44. Invited Talk, *WTS October Luncheon*, “Emergency Preparedness - Are We Ready? Earthquake Preparedness: Lessons Learnt from Recent Earthquakes and Implications for Oregon.” WTS, October 13, 2015, Portland, Oregon.
45. Contributed Talk, *Cascadia Lifelines Program*, “Cost-effective Improvements in Seismic Performance of Legacy Infrastructure.” Oregon State University, October 8, 2015, Portland, Oregon.
46. Invited Talk, *Eugene Country Club*, “Earthquake Preparedness: Lessons Learnt from Recent Earthquakes and Implications for Oregon.” September 29, 2015, Eugene, Oregon.
47. Contributed Talk, *Center for Risk-based Community Resilience Planning*, “Multi-Hazard Damage and Loss Estimation: Application to Seaside, OR.” NIST CORE Meeting, September 18, 2015 Portland, Oregon.
48. Invited Talk, *Corvallis Seismic Strategies*, “2014 Napa, California and 2015 Nepal Earthquake: Overview of Observations and Implications for Oregon.” Downtown Corvallis Association, September 9, 2015, Corvallis, Oregon.
49. Invited Talk, *PEER – EERI – GEER Reconnaissance Briefing on the April 2015 Gorkha (Nepal) Earthquake*, “Structures and Data Collection.” UC Berkeley, August 13, 2015, Berkeley, California. (*Presentation slides and video copy available online: http://peer.berkeley.edu/events/wp-content/uploads/2015/07/03-PEER_Barbosa_2015_Aug13_FINAL.pdf. (Attended by 80 in-room participants and more than 600 participants online live).*)
50. Invited Talk, *National Science for Earthquake Technology – Nepal*, “Field Work Closing Seminar”. NSF RAPID/NSET, July 2, 2015, Kathmandu, Nepal.
51. Invited Talk, *10th Annual Energy & Construction Best Practices Summit - Clean Tech. - Washington's WISE Future*, “Designing for Resilience in the Pacific Northwest.” Center of Excellence for Clean Energy, May 29, 2015, Tacoma, Washington.
52. Invited Talk, *Monthly Meeting of the Cascade Chapter of The American Society of Safety Engineers*, “Oregon Resilience Plan and Current Status of the Implementation Task Force.” The American Society of Safety Engineers, May 19, 2015, Eugene, Oregon.
53. Invited Talk, *AWC Meeting* “Hybrid CLT Project.” American Wood Council, April 21, 2015, Portland, Oregon.
54. Invited Talk, *EERI 2015 Annual Meeting*, “Review of Post-hazard event Safety Evaluation Procedures for Civil Infrastructure.” EERI, March 31-April 3, 2015, Boston, Massachusetts.
55. Poster, *EERI 2015 Annual Meeting*, “Multi-Objective Loss Assessment of Oregon Bridges due to Seismic Hazards. EERI, March 31-April 3, 2015, Boston, Massachusetts.
56. Invited Talk, *LCUCC monthly lunch meeting*, “Lessons Learned from Recent Earthquakes: Implications for Oregon.” Lane County Utilities Coordinating Council, November 2014, Springfield, Oregon. (*Presented to 40 members of the LCUCC*)
57. Invited Talk, *EERI – PEER Reconnaissance Briefing on the Aug 24, 2014 South Napa Earthquake*, “Structures.” UC Berkeley, September 15, 2014. (*Presentation slides and video copy available online: <http://www.eqclearinghouse.org/2014-08-24-south-napa/files/2014/08/4-EERI-PEER-Briefing-Structures-Barbosa.pdf>. (Attended by 80 in-room participants and more than 1,100 participants online live)*)
58. Invited Talk, *NEES Quake Summit*, “Integration of Simulation Data Within the NEES Project Warehouse – NEES Research.” Earthquake Engineering Research Institute, July 21-25, 2014, Anchorage, Alaska. (*Closing session of NEES Quake Summit – attended by 20 people*)

59. Contributed Talk, *10th National Conference on Earthquake Engineering*, “Effects of Earthquake Ground-motion Duration on the Response of a 9-story Steel Moment Resisting Frame.” Earthquake Engineering Research Institute, July 21-25, 2014, Anchorage, Alaska.
60. Contributed Talk, *10th National Conference on Earthquake Engineering*, “Developing a soil bridge-interaction model for studying the effects of long-duration earthquake motions.” July 21-25, 2014, Anchorage, Alaska.
61. Contributed Talk, *10th National Conference on Earthquake Engineering*, “Numerical Modeling of URM Infill Walls Retrofitted with Embedded Reinforcing Steel.” Earthquake Engineering Research Institute, July 21-25, 2014, Anchorage, Alaska.
62. Contributed Talk, *International Conference on Coastal Engineering, Seoul, Korea*. “Tsunami Loadings on Structures: Review and Analysis.” July 2014.
63. Contributed Talk, SWST 2014 International Convention, “Cross Laminated Timber Panels Using Hybrid Poplar.” International Society of Wood Science & Technology (SWST), June 23-27, 2014, Zvolen, Slovakia.
64. Contributed Talk, *34th International Conference of Coastal Engineering*, “Tsunami Loadings on Structures: Review and Analysis.” Coastal Engineering Research Council of the COPRI of the American Society of Civil Engineers, June 15-20, 2014, Seoul, Korea.
65. Contributed Talk, *Construction Research Congress 2014*, “Mapped Workflow for Safety and Reliability Assessments of Use and Re-use of Formwork.” ASCE, May, 19-21, Atlanta, Georgia. (*Presented by Ph.D. Student A.C. Pestana*)
66. Poster Presentation, *OSU CCE/MIME Graduate Research Exposition*, “Hybrid CLT panels for sustainable building solutions.” Oregon State University, March 6, 2014, Portland, Oregon. (*Awarded First Place – Presented by Ph.D. student Vahid Mahdaviifar*)
67. Poster Presentation, *OSU CCE/MIME Graduate Research Exposition*, “Manufacturing hybrid Cross Laminated Timber (CLT) panels.” Oregon State University, March 6, 2014, Portland, Oregon. (*Presented by Ph.D. student Vahid Mahdaviifar*)
68. Contributed Talk, *IMAC XXXII, A Conference and Exposition on Structural Dynamics*, “Nonlinear Identification of a Seven-story Shear Wall Building Based on Numerically Simulated Seismic Data.” Society for Experimental Mechanics, February 3-6, 2014, Orlando, Florida.
69. Invited Talk, *OpenSees Days 2013*, “Modeling of Frame Structures in Fire.” PEER and NEES, August 26-27, 2013, Berkeley, California. (*Attended by 20 people live, YouTube video has been seen by 650+ viewers*)
70. Invited Talk, *NEES Quake Summit*, “NEES/OSG: Experiences in the use of “opportunistic” computing resources.” NEES, August 7-8, 2013, Reno, Nevada. (*attended by 20 people*)
71. Contributed Talk, *11th International Conference on Structural Safety & Reliability, ICOSSAR 2013*. “Reliability-Based Robustness Assessment of Structures Subjected to Post-Mainshock Hazard Events.” International Association for Structural Safety and Reliability, June 16-20, 2013, New York.
72. Contributed Talk, *First International Conference on Performance-Based and Life-Cycle Structural Engineering (PLSE 2012)*. “Preliminary Proposal for Performance-Based Structural Engineering for Fire Following Earthquake.” FCE and RISUD, December 5-7, 2012, Hong Kong.
73. Invited Talk, *2012 PEER Annual Meeting*, “Vector-valued Probabilistic Seismic Hazard Analysis and Probabilistic Seismic Demand Analysis Application to the 13-story NEHRP

- Reinforced Concrete Frame-Wall Building Design Example.” PEER, October 2-7, 2012. Berkeley, California.
74. Contributed Talk, *15th World Congress on Earthquake Engineering (15WCEE)*, “Seismic Robustness Assessment of Code Compliant Steel Moment Resisting Frame under Seismic Triggered Sequences of Events.” The International Association of Earthquake Engineering, September 24-28, 2012, Lisbon, Portugal. (presented by co-advised Ph.D. student Filipe Ribeiro)
 75. Contributed Talk, *2012 Joint Conference of the Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability*. “Identifying the Hysteretic Models of Structural Elements using Instantaneous Modal Parameters.” EMI, ASCE, June 17-20, 2012, Notre Dame, Indiana. (presented by Babak Moaveni)
 76. Invited Talk, *2011 PEER Annual Meeting*, “High Fidelity Nonlinear Building Simulation and Use of Open Science Grid.” PEER, Sept. 30-Oct. 1, 2011, Berkeley, California.
 77. Keynote talk, *2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2009)*. “System and Damage Identification Studies of a Seven-Story Reinforced Concrete Building Structure Subjected to Shake Table Tests.” CERTH, June 22-24, 2009, Rhodes, Greece. (Presented by Joel Conte)
 78. Contributed Talk, *First International Conference on Parallel, Distributed and Grid Computing Engineering*, “Use of High Performance Computing for Probabilistic Seismic Response Sensitivity Analyses of a Building Structure.” Civil-Comp Press, April 6-8, 2009, Pécs, Hungary. (Presented by Marco Faggella).
 79. Invited Talk, *Sixth International Conference on Urban Earthquake Engineering*, “Comparison of Dynamic Strut-and Tie and Fiber Beam-Column Models for the UCSD Seven-Story Full-scale Building Slice Test.” CUEE, March 3-4, 2009, Tokyo, Japan.
 80. Contributed Talk, *27th International Modal Analysis Conference (IMAC-XXVII)*. “Uncertainty Analysis of Identified Damping Ratios in Nonlinear Dynamic Systems.” Society for Experimental Mechanics, February 9-12, 2009, Orlando, Florida. (Presented by Babak Moaveni)
 81. Contributed Talk, *Seismic Engineering International Conference*, “Seismic Assessment of R/C Building Structure through Nonlinear Probabilistic Analysis with High-performance Computing.” MERCEA08, June 24-27, 2008, Messina and Reggio Calabria, Italy. (Presented by Marco Faggella)
 82. Contributed Talk, *Convegno "Valutazione e riduzione della vulnerabilità sismica di edifici esistenti in cemento armato"*, “Probabilistic Seismic Response Sensitivity Analysis of a 3-D Nonlinear Model of a Building Structure.” May 29-30, 2008, Rome, Italy. (Presented by Marco Faggella).
 83. Contributed Talk. “Bridge Abutment Interaction under Seismic Loading.” *SCAMI-2*, November 19-21, 2007, Changsha, China. (Presented by Marco Faggella)
 84. Contributed Talk, *7th Congresso de Sismologia e Engenharia Sísmica*, “Modelação Numérica de Pontes Incluindo Interação Encontro-Superestrutura.” Sociedade Portuguesa de Engenharia Sísmica, September 26-28, 2007, Porto, Portugal. (Presented by Laura Caldeira).
 85. Contributed Talk, *25th International Modal Analysis Conference (IMAC-XXV)*. “Uncertainty Analysis of Modal Parameters Obtained from Three System Identification Methods.” SEM, Feb. 19-22, 2007. (Presented by Joel Conte)

86. Contributed Talk, *Congreso de Métodos Numéricos en Ingeniería 2005*, “Utilização de um Modelo Híbrido-Misto na Análise Dinâmica de Estruturas Reticuladas Planas.” SEMNI and APMTAC, July 4-7, 2005, Granada, Spain. (Presented by Mario Silva)
87. Contributed Talk, *IX International Conference on Civil and Structural Engineering Computing, CC2003*, “Implementation of a Hybrid-Mixed Stress Model Based on the Use of Wavelets.” Civil-Comp press. September, 2-4 2003, Egmond-aan-Zee, Netherlands. (Presented by Luis Castro)

C2.2. Participation at Invitational Workshops

1. Keynote Talk, *Seminar Lessons Learned – 2017 Mexico City Earthquake*. “Performance of Critical Buildings (Schools, Hospitals).” Oregon State University, February 1, 2018, Corvallis, Oregon, USA.
2. Keynote Talk, *OpenSees Days Europe*, “Use of OpenSees for the development of physics-based tsunami fragility functions.” First European Conference on OpenSees, June 19-20, 2017, Porto, Portugal.
3. Keynote Talk, *OpenSees Days Europe*, “Dynamic Analysis with Examples – Seismic and Tsunami Loadings.” Workshop on Multi-Hazard Analysis of Structures using OpenSees, July 3-4, 2014, Porto, Portugal.
4. Keynote Talk, *OpenSees Days Europe*, “Uncertainty and Sensitivity Analysis using High-throughput Computing (HTC) and High-performance Computing (HPC).” Workshop on Multi-Hazard Analysis of Structures using OpenSees, July 3-4, 2014, Porto, Portugal.

C3. Grant and Contract Support

List covers grants/contracts on which candidate served as PI or coPI only. “My share” indicates the amount of funding, if any, over which the candidate had control.

<i>Agency & Dates</i>	<i>PI (and coPIs)</i>	<i>Title</i>	<i>Total Budget</i>	<i>My Share</i>
US National Science Foundation 9/21 – 8/26	Ruggiero, P. (Barbosa listed as Senior Personnel)	Large-Scale CoPe Cascadia Coastlines & People Hazards Research Hub	\$18,800,000	\$250,000
US National Science Foundation 9/21 – 8/24	Barbosa, A.R. , Simpson, B., Sinha, A., Brown, N., van de Lindt, J.	Collaborative Research: Converging Design Methodology - Multi-objective Optimization of Resilient Structural Spines	\$1,100,000	\$530,000 (OSU Share)
USDA Wood Innovations Program 8/21 – 7/23	Herbert, J. Barbosa, A.R.	Engineered timber structural frame for an innovative modular building system.	\$235,000	\$150,000
NAS/NCHRP 8/20-11/22	Barbosa, A. R. , Olsen, M., Veletzos, M., Chen, Z.	Guidelines for Response Planning, Assessment, and Rapid Restoration of Service of Bridges in Extreme Events	\$400,000	\$200,000
NIST 2/20 – 1/25	Cox, D., Barbosa, A.R.	NIST Center of Excellence in Community Resilience	\$1,300,000	\$650,000
US Forest Service Wood Innovations Program 9/20 – 8/22	Macdonald, Iain, Barbosa, A.R.	Industry-Responsive Technical Testing for Mass Timber Products and Buildings	\$250,000	\$125,000
US Forest Service, Wood Innovations Grants 9/20 – 8/22	Barbosa, A.R.	Wood Innovations: Developing an application for mass plywood panels in seismic and energy wall retrofits	\$94,287	\$94,287
Cascadia Lifelines Project 6/20 – 5/21	Simpson, B. Barbosa, A.R.	Fragility Function Viewer App	\$76,044	\$38,022
USDA Agricultural Research Service 8/19 – 7/23	Riggio, M., Barbosa, A.R. , Muszynski, L.	Design, construction, and maintenance of mass timber PT shear walls: data, models and recommendations.	\$272,710	\$90,900

USDA Agricultural Research Service 9/18 – 8/20	Sinha, A., Barbosa, A.R. , Simpson, B.	Innovative lateral systems for mass timber buildings	\$489,000	\$163,000
US Economic Dev. Admin. 9/18 – 8/19	Barbosa, A.R. , Higgins, C.	Design and Testing of a Pier-and-Spandrel CLT Solution	\$70,000	\$35,000
USDA Agricultural Research Service 9/18 – 8/20	Fischer, E. Barbosa, A.R. , Sinha, A.	Fire Performance of Cross- Laminated Timber- Concrete Composite Floors	\$250,000	\$75,000
USDA Agricultural Research Service 9/18 – 8/19	Sinha, A., Morell, J., Barbosa, A.R. , Nairn, J.	Water in Mass Timber: How Could That Ever Happen?	\$250,000	\$62,500
USDA Agricultural Research Service 9/18 – 8/19	Barbosa, A.R.	Impact of Moisture on the Cyclic Performance of a Two-Story Post-Tensioned CLT Rocking Wall with External Hysteretic Energy Dissipators	\$25,000	\$25,000
NSF CMMI 7/17 – 7/21	Cox, D.T. Barbosa, A.R.	Collaborative Research: Wave, Surge, and Tsunami Overland Hazard, Loading and Structural Response for Developed Shorelines	\$385,882	\$207,256
NCHRP 7/17 – 6/18	Barbosa, A.R. , Trejo, D.	Project 20-07/Task 402: Improved Reinforced Concrete Interface Shear Design and Detailing for LRFD Specifications	\$95,000	\$47,500
ODOT 2/17 – 2/19	Barbosa, A.R. , Trejo, D.	Performance of High- Strength Steel Reinforcement in Shear Friction Applications	\$400,000	\$200,000
USDA Agricultural Research Service 6/17 – 5/20	Barbosa, A.R. , Sinha, A., Higgins, C.	Seismic Performance of CLT and CLT-Concrete Composite Floor Diaphragms	\$250,000	\$84,000
USDA ARS 6/17 – 5/20	Higgins, C., Sinha, A., Barbosa, A.R.	Composite Concrete-CLT Floor Systems for Tall Building Design	\$250,000	\$84,000

USDA Agricultural Research Service 6/17 – 5/20	Riggio, M., Barbosa, A.R. , Wymelenberg, K.	Living Lab @ Peavy Hall: Structural Health Performance of Mass Timber Buildings	\$156,331	\$52,110
USDA Agricultural Research Service 7/16 – 6/19	Riggio, M., Barbosa, A.R. , Van Den Wymelenberg, K.	SMART-CLT – “Structural Health Monitoring and Post-Occupancy Performance of Mass Timber Buildings.”	\$147,497	\$36,874
KPFF Consulting Engineers	Barbosa, A.R. , Sinha, A., Higgins, C.	Structural Testing for the Framework Project	\$109,224	\$36,408
Oregon DOT 1/16 – 12/17	Higgins, C., Barbosa, A.R.	Development of Titanium Seismic Retrofits for Deficient Concrete Columns	\$400,000	\$200,000
Skidmore, Owings & Merrill, SOM 10/15 – 9/16	Barbosa, A.R. , Higgins, C.	Composite Long-span Mass-timber Floor System for Building Applications	\$48,000	\$24,000
NSF ENH 7/2015 – 6/2016	Barbosa, A.R. , Olsen, M., Stavridis, A.	RAPID/Collaborative Research: Post-Disaster, Reinforced Concrete Building Performance Data Collection following the April 25, 2015 Nepal Eqke	\$81,326	\$28,643
NIST 2/15 – 1/20	Cox, D., Scott, M.H., Barbosa, A.R.	NIST Center of Excellence in Community Resilience	\$1,147,532	\$344,260
Cascadia Lifeline Prog. 10/15 – 12/16	Barbosa, A.R.	Cost-Effective Improvements in Seismic Performance of Legacy Infrastructure (Year 3)	\$48,961	\$48,961
PacTrans 6/15 – 5/16	Barbosa, A.R. and Stuedlein, A.	Torsional Safety of Highway Traffic Signal and Signage Support Structures	\$20,971	\$11,000
Oregon DOT 09/14-10/15	Stuedlein, A. and Barbosa, A.R.	Shafts in Torsion	\$60,000	\$20,000
Oregon BEST 10/14-08/16	Muszynski, L., Barbosa, A.R. , Sinha, A., and Gupta, R.	Commercialization of CLT Panel Production in Oregon	\$150,000	\$37,500

Cascadia Lifeline Prog. 10/14 – 09/15	Barbosa, A.R.	Cost-Effective Improvements in Seismic Performance of Legacy Infrastructure (Year 2)	\$92,961	\$92,961
USDA NIFA 01/14-08/16	Muszynski, L., Barbosa, A.R. , Sinha, A., and Gupta, R.	Hybrid Cross-Laminated Timber Panels for Sustainable Building Solutions	\$289,631	\$72,485
NAS/NCHRP 11/13-11/15	Olsen, M. and Barbosa, A. R. , Veletzos, M., Chen, Z.	NCHRP 14-29: Assessing, Coding, and Marking of Highway Structures in Emergency Situations (II)	\$299,655	\$150,000
NAS/NCHRP 11/13-11/15	Olsen, M. and Barbosa, A.R. , Veletzos, M. Chen, Z.	NCHRP 14-29: Assessing, Coding, and Marking of Highway Structures in Emergency Situations (I)	\$100,000	\$50,000
CalTrans 11/13 – 08/15	Barbosa, A.R. and Ashford, S.	Assessment of Soil Arching Factor for Retaining Wall Pile Foundations (Phase 1)	\$185,257	\$92,629
Cascadia Lifeline Prog. 10/13-09/14	Barbosa, A.R.	Cost-Effective Improvements in Seismic Performance of Legacy Infrastructure (Year 1)	\$48,961	\$48,961
PACTRANS 9/13 – 12/14	Barbosa, A.R. and Trejo, D.	High-Performance Bridge Systems for Lifeline Corridors in the Pacific Northwest	\$100,000	\$50,000
Oregon DOT 9/13 – 12/15	Barbosa, A.R. and Trejo, D.	High Strength Steel Reinforcement for Bridges	\$135,000	\$67,500
PACTRANS 9/13 – 10/14	Mason, H.B. and Barbosa, A.R.	SSI Bridge 2: Evaluation of Soil-structure Interaction Effects on PNW Bridges	\$20,000	\$10,000
CPWR / NIH 07/13 – 06/14	Gambatese, J. and Barbosa, A.R.	Use and Re-use of Formwork: Safety Risks and Reliability Assessment	\$29,925	\$14,963
PACTRANS + ODOT 9/12 – 12/13	Trejo, D. and Barbosa, A.R.	Inspection, Assessment, Monitoring, and Renewal Strategies for Structures on Critical Lifeline Corridors	\$180,000	\$90,000
PACTRANS 9/12 – 8/13	Barbosa, A.R. and Mason, H.B.	SSI Bridge: Evaluation of Soil-structure Interaction Effects on PNW Bridges	\$44,727	\$22,363
Totals			\$28,888,882	\$4,713,083

C3.1. Donations

<i>Year</i>	<i>Source</i>	<i>Donation</i>	<i>Value</i>
2021	Simpson Strong-Tie	Glued-in Rod in Mass Timber	\$4,800
2021	18 Different Agencies	Research on Engineering, Architecture and Construction of Timber Structures (REACTS) Consortium -	\$250,000
2014	Perryman Company	Strengthening of Civil Infrastructure (50% for C. Higgins and 50% my share)	\$115,000

C3.2. Proposals Currently under Review

<i>Agency</i>	<i>PI (and co-PIs)</i>	<i>Title</i>	<i>Budget</i>	<i>Duration</i>
USDA Agricultural Research Service	Barbosa, A.R, Fretz, M, Sheine, J., Simpson, B., Sinha, A.	Reuse Potential of Mass Timber Constructions	\$240,000	2 years
USDA Agricultural Research Service	Fretz, M., Barbosa, A.R., Sheine, J., Van Den Wymelenberg, K.	Forest to Facade: Developing Seismic + Energy Mass Timber Commercial Facade Retrofits	\$210,000	2 years
USDA Agricultural Research Service	Simpson, B., Sinha, A., Barbosa, A. R.	Collating experimental data to support the numerical modeling of mass timber systems	\$87,727	2 years

C4. Patents Filed and In Process

None

C5. Other Scholarship and Creative Activities

C5.1. Non-refereed Conference Proceedings

1. Barbosa, A.R., Castro, L.M.S.S., (2003). “Resolução de Problemas de Elasticidade com Wavelets no Intervalo.” *VII Encontro Nacional de Mecânica Aplicada e Computacional, APMTAC*, Évora, Portugal.
2. Barbosa, A.R., Castro, L.M.S.S., (2011). “Wavelets on the Interval - Application to elasticity problems, *Ondelettes et équations aux dérivées partielles*, Luminy, Marseille, France.

C5.2. Conference Abstracts

1. Simpson, B.G., **Alam, M.S.**, Barbosa, A.R. (2021). “Fragility function viewer for Oregon Lifelines.” ASCE Lifeline Conference, February 7-10, 2021, University of California, Los Angeles (abstract submitted, conference postponed)
2. **Alam, M.S.**, Simpson, B.G., Barbosa, A.R. (2020). “Developing appropriate fragility function database for Oregon Lifelines.” Research Meeting, July 15-16, 2020, Natural Hazards Center, University of Colorado, Boulder

3. Fischer, E. C., Shephard, A. B., Barbosa, A. R., and Sinha, A. (2019). Fire performance of timber-concrete composite floors. International Fire Safety Symposium, Ottawa, Ontario, Canada, June 5-7, 2019. (Oral)
4. Riggio, M., **Baas, E.**, Barbosa, A.R., **Mugabo, I.**, Schmidt, E. (2019). "Living Lab at Peavy Hall: Structural Health Monitoring of Mass Timber Buildings." *SHATiS, International Conference on Structural Health Assessment of Timber Structures*, Guimarães, Portugal
5. **Soti, R.**, Barbosa, A.R. (2019). "In-plane Strengthening of Masonry Walls using Near Surface Surface Mounted (NSM) Reinforcing Steel Bars." *URM Seismic Upgrade Symposium* to be held in Portland, OR, July 18-19, 2019. (Invited Presentation Accepted)
6. **Romano, F.**, **Alam, M.S.**, Faggella, M., Zucconi, M., Ferracuti, B., and Barbosa, A.R. (2019). "Seismic loss analysis of a modern RC building accounting for uncertainty of infill strut modeling parameters." *7th International Conference on Computational Methods in Structural Dynamics & Earthquake Engineering*, COMPDYN 2019, 24-26 June 2019, Crete, Greece.
7. Park, H., Alam, M.S., Barbosa, A.R., & Cox, D.T. (2019). "Probabilistic Seismic and Tsunami Damage Analysis for Community Resilience Assessment." ASCE Engineering Mechanics Institute Conference, ASCE, Pasadena, CA, June 18 – 21, 2019.
8. **Shrestha, S.**, Higgins, C., Barbosa, A.R. (2018). "Development of Seismic Retrofits for Reinforced Concrete Bridge Columns using Titanium Alloy Bars." *Titanium USA 2018* by International Titanium Association (ITA). October 2018. *Poster*
9. Barbosa, A. R., **Kameshwar, S.**, Park, H., **Alam, M.S.**, Farokhnia, K., Cox, D., van de Lindt, J.W. (2018). "Decision-support framework for community resilience based on Bayesian network modeling." Session on Advancing Community Resilience Through Civil Engineering, *2018 ASCE Convention*, Denver, Colorado, October 12 – 15, 2018.
10. Barbosa, A.R., **Rodrigues, L.G.**, Sinha, A., Higgins, C., **DeMeza, B.**, Zimmerman, R., Breneman S., Pei, S., van de Lindt, J.W., Berman, J., McDonnell, E. , Branco, J.M., Neves, L.A.C., (2018). "Numerical Modeling of CLT and CLT-Concrete Composite Diaphragms Tested on A Shake Table Experiment." *World Conference on Timber Engineering*, August 20–23, 2018, Seoul, Republic of Korea. *Poster*
11. Lomonaco, P., **Alam, M.S.**, Arduino, P., Barbosa, A.R., Cox, D., Do, T., Eberhard, M., Motley, M., Shekhar, K., Tomiczek, T., Park, H., van de Lindt, J.W., Winter, A. (2018). "Experimental Modeling of Wave Forces and Hydrodynamics on Elevated Coastal Structures Subject to Waves, Surge or Tsunamis: The Effect of Breaking, Shielding and Debris." *36th International Conference on Coastal Engineering*, July 30 - August 3, 2018, Baltimore, Maryland.
12. Cox, D.T., Park, H., **Alam, M.S.**, Barbosa, A. R. (2018). "Probabilistic tsunami hazard assessment and damage estimation of the built environment: Application to the Cascadia Subduction Zone and Seaside, OR." *36th International Conference on Coastal Engineering*, July 30 - August 3, 2018, Baltimore, Maryland.
13. Sutley, E.J., Tomiczek, T., Dillard, M., Koliou, M., Deniz, D., Hamideh, S., van de Lindt, J.W., Mitrani-Reiser, J., Barbosa, A.R., Watson, M., Xiao, Y., Helgeson, J. (2018). "The Role of the Interior in Accurately Classifying Flood Damage to Homes and Businesses." *Researchers Meeting, International Research Committee on Disasters and the Natural Hazards Center*, Broomfield, Colorado, July 11, 2018.
14. Watson, M., Xiao, Y., Helgeson, J., Wu, K., Dillard, M., Hamideh, S., Sutley, E., van de Lindt, J.W., Koliou, M., Farokhnia, K., Barbosa, A., Deniz, D. (2018). "An Interdisciplinary Approach to Understanding Business Recovery after Disasters." *43rd Annual Natural Hazards Research and Applications Workshop*. Broomfield, Colorado, July 8 – 11, 2018.

15. Misra, S., Padgett, J.E., Barbosa, A.R., Webb, B. (2018). "Post-Earthquake Restoration Modelling of Roadways and Bridges – A survey based approach." *Eleventh U.S. National Conference on Earthquake Engineering*, June 25-29, 2018. Los Angeles, CA.
16. Gidaris I., A.R. Barbosa and J.E. Padgett. (2018). Seismic aftershock fragility analysis of steel buildings based on stochastic ground motions. *Eleventh U.S. National Conference on Earthquake Engineering*, June 25-29, 2018. Los Angeles, CA.
17. Berman, J., Wichman, S., Pei, S., van de Lindt, J., Barbosa, A., Dolan, J., Blomgren, H.-E., McDonnell, E., Zimmerman, R. (2018). "Dynamic Testing and Analysis of Multi-Story Rocking Cross Laminated Timber Walls." *Eleventh U.S. National Conference on Earthquake Engineering*, June 25-29, 2018. Los Angeles, CA.
18. Pei, S., van de Lindt, J.W., Barbosa, A.R., Blomgren, H.-E., Berman, J., Dolan, J.D., McDonnell, E., Zimmerman, R.B. (2018). "Full-Scale Shake Table Testing of A Two-Story Mass-Timber Rocking Wall Building" *Eleventh U.S. National Conference on Earthquake Engineering*, Los Angeles CA
19. Pei, S., van de Lindt, J.W., Barbosa, A.R., Berman, J.W., McDonnell, E., Dolan, J.D., Blomgren, H.-E., Zimmerman, R.B. (2018). "Full-scale shake table test of a two-story mass timber building with resilient rocking wall systems" *ASCE Structures Congress*, Fort Worth TX, 2018.
20. Pei, S., van de Lindt, J.W., Berman, J.W., Barbosa, A.R., McDonnell, E., Zimmerman, R.B., Dolan, J.D., Rammer, D. (2018). "Full-Scale Shake Table Test of a Two-Story Mass-Timber Building with Resilient Rocking Walls." *16th European Conference on Earthquake Engineering*, Thessaloniki, Greece
21. **Kameshwar, S.**, Barbosa, A.R., Cox, D. (2018). "Surrogate Model Based Tsunami Fragility and Sensitivity Analysis of a Three-Story Steel Building." *ASCE Engineering Mechanics Institute Conference 2018*, May 29 - June 1, Cambridge MA.
22. Cox, D.T., Barbosa, A.R., Park, H., **Alam, M.S.** (2018). "A Probabilistic Framework for Seismic and Tsunami Community Loss Assessment." *ASCE-SEI Structures Congress*, ASCE-SEI, April 19–21, 2018, Fort Worth, Texas.
23. Barbosa, A.R., Higgins, C., Sinha, A., **Rodrigues, L., DeMeza, B.**, Zimmerman, R., Breneman, S., Pei, S., van de Lindt, J.W., Berman, J., McDonnell, E., Branco, J., Neves, L. (2018). "Seismic Design and Response of CLT and CLT-Concrete Floor Diaphragms." *ASCE-SEI Structures Congress*, ASCE-SEI, April 19–21, 2018, Fort Worth, Texas.
24. **DeMeza, B.**, Barbosa, A.R., Sinha, A., Higgins, C., Zimmerman, R., Breneman, S., Pei, S., van de Lindt, J.W., Berman, J., McDonnell, E., Branco, J., Neves, L. (2018). "Design and Shake-Table Experimental Results of CLT and CLT-Concrete Composite Diaphragms." *Poster, the 3rd International Mass Timber Conference*, Portland OR.
25. Pei, S., van de Lindt, J.W., Barbosa, A.R., Berman, J.W., McDonnell, E., Dolan, J.D., Blomgren, H.-E., Zimmerman, R. B. (2018). "Wood Rocks: How did a resilient mass timber building survive 27 earthquakes" *the 3rd International Mass Timber Conference*, Portland OR.
26. Pei S. van de Lindt, J.W., Barbosa, A.R., Berman, J.W., McDonnell, E., Dolan, J.D., Blomgren, H., Zimmerman, R. (2017). "How to do thirty-four shake table tests in one summer." Invited presentation at UC San Diego's NSF NHERI site user training workshop, December 2017.
27. O'Banion, M.S., Olsen, M.J., Barbosa, A.R. (2017). "Post-Earthquake Damage Assessment of a UNESCO Heritage Site in Nepal Using Lidar and a Virtual Reality Visualization Environment." *International Workshop on Computing in Civil Engineering (IWCCE 2017)*, ASCE, Seattle, WA.
28. **Mahdavifar, V.**, Barbosa, A.R., Sinha, A., Muszynski, L., Gupta, R. (2017). "Lateral and Withdrawal Capacity of One Screw Type on Hybrid Cross Laminated Timber Panel

- Applications.” *71st International Convention*, Forest Products Society, June 26-28, 2017, Starkville, Mississippi
29. Larkin, B., Muszynski, L.M*, Barbosa, A. R., Sinha, A., and Gupta, R. (2017). IUFRO All Division 5 Conference. Adhesive bond integrity in hybrid cross laminated timber (CLT) layups., Vancouver, BC, Canada. International, Accepted. June 15, 2017. (Oral).
 30. Attary N., van de Lindt J.W., Barbosa A.R., Cox D.T. and Unnikrishnan V.U.. (2017). “Performance-Based Risk Assessment of Structures Subjected to Multi-Hazard Case of Tsunamis Following Earthquakes.” *ASCE Engineering Mechanics Institute 2017 Conference*, ASCE, June 4-7, San Diego, CA.
 31. Barbosa A.R., **Soti, R.** (2017). “Three-Dimensional Numerical Evaluation of Masonry Walls Retrofitted with Near Surface Mounted Reinforcing Steel Bars.” *ASCE Engineering Mechanics Institute 2017 Conference*, ASCE, June 4-7, San Diego, CA.
 32. **Rodrigues, L.**, Branco, J., Neves, L., Barbosa, A.R. (2017). “Robustness of Multi-Story Timber Buildings in Seismic Regions.” *Third INFRARISK- Summer Workshop*, LNEC, Lisbon, Portugal.
 33. Attary, N., van de Lindt, J.W., Barbosa, A.R., Cox, D. T., Unnikrishnan, V. (2017). “Performance-Based Risk Assessment of Structures Subjected to Multi-Hazard Case of Tsunamis Following Earthquakes.” *ASCE Engineering Mechanics Institute 2017 Conference*, ASCE, June 4-7, San Diego, CA.
 34. **Alam, M.S.**, Barbosa, A.R., Park, H., Cox, D. (2017). “Probabilistic Seismic and Tsunami Hazard Analysis (PSTHA) Conditional on A Mega-Thrust Rupture of The Cascadia Subduction Zone.” *2017 EERI annual meeting*, March 7-10, Portland, OR.
 35. **Soti R.**, Barbosa, A.R., Jaho, G., Mortola, E. A., Lagomarsino S., Cattari S. (2017). “New Generation Fragility Functions for Unreinforced Masonry Buildings: Application to the City of Portland, Oregon.” *EERI annual Meeting*, on March 7-10, Portland, OR.
 36. Barbosa, A.R., Alam, M.S., Cox, D.T., van de Lindt, J.W. (2016). “Earthquake and tsunami fragility surfaces for a masonry infilled reinforced concrete building structure.” *1st International Workshop on Resilience*, Torino, Italy, September 20 – 22, 2016.
 37. Park, H., D. Cox, A. Barbosa. (2016). Probabilistic Tsunami hazard and damage assessment at Seaside, Oregon, *Korean Society of Coastal and Ocean Engineering*, Conference Busan, S. Korea, June.
 38. **MahdaviFar, V.**, Barbosa, A.R., Sinha, A., Muszynski, L., Gupta, R. (2016). “Shear and Withdrawal Capacity of Fasteners on Hybrid Cross-Laminated Timber Panels.” *70th International Convention- Forest Products Society*, June 26-29, 2016, Portland, OR.
 39. Larkin B., Muszynski, L., Barbosa, A.R., Sinha, A., Gupta, R. (2016). Effective bonding parameters for hybrid cross-laminated timber (CLT) layups. *70th International Convention- Forest Products Society*, June 26-29, 2016, Portland, OR.
 40. **Alam, M.S.**, Barbosa, A.R. (2016). “Infill Strut Model Class Uncertainty of Seismic Response of Reinforced Concrete Masonry Infilled Frames.” *ASCE Engineering Mechanics Institute Conference*, ASCE, May 22-25, 2016, Nashville, TN.
 41. Chang, W.Y., Nozari, A., **Alam, M.S.**, Stavridis, A. Moaveni, B., Barbosa, A.R., Wood, R.L. (2016). “Structural Identification and Modeling of a Three-Story School Building Damaged During the 2015 Gorkha Earthquake.” *EMI 2016, ASCE Engineering Mechanics Institute Conference*, ASCE, May 22-25, 2016, Nashville, TN.
 42. Huffman, J.C., Barbosa, A.R., Stuedlein, A.W. (2016). “Simulation Framework for Reliability-based Serviceability Assessments of Multi-Story Steel-framed Structures Supported on Spatially-variable Soil.” *ASCE Geotechnical & Structural Engineering Congress*, ASCE, Phoenix, AR.

43. **Soti, R.**, Barbosa, A.R., Stavridis, A. (2015). “Analytical and Experimental Study of Seismic Performance of URM Walls and Infilled RC Frames Retrofitted with Near Surface Mounted Steel Bars.” *2nd Conference on Improving the Seismic Performance of Existing Buildings*, ATC-SEI, Dec. 10-12, San Francisco, CA.
44. Larkin, B., Muszynski, L., Sinha, A., Barbosa, A.R., Gupta, R. (2015). “Effective adhesive systems and optimal bonding parameters for hybrid CLT.” *58th SWST International Convention. Renewable Materials and the Bio-Economy*, SWST, June 7-12, Jackson Lake Lodge, Grand Teton NP, Jackson, WY
45. Sinha A., Barbosa, A.R., **Kramer, A.** (2015). “Design and Performance of Steel Energy Dissipators to be Used in Cross-Laminated Timber Self-Centering Systems.” *58th SWST International Convention. Renewable Materials and the Bio-Economy*, SWST, June 7-12, Jackson Lake Lodge, Grand Teton NP, Jackson, WY
46. **Alam, M.**, Barbosa, A.R. (2015). “Modeling Uncertainties in Reinforced Concrete Masonry Infilled Frames.” *Poster, ASCE Structures Congress*, ASCE, Portland, OR.
47. Mason, H.B., Barbosa, A.R., **Carey, T.**, Scott, M. (2015). “Tsunami bore impact on soil-bridge systems.” *Oral Presentation, ASCE Structures Congress*, ASCE, Portland, OR.
48. Asgariéh, E., Moaveni, B., and Barbosa, A. R. (2015). “Probabilistic Nonlinear Identification of a Shear Wall using Time and Frequency Data.” *IMAC XXXIII*, Society for Experimental Mechanics, February 2015, Orlando, FL.
49. **Belejo, A.**, Barbosa, A.R. (2014). “Mainshock – Aftershock Interaction Diagram for a 3D Plan-Asymmetric Structure.” *11th World Congress on Computational Mechanics (WCCM XI)*, International Association for Computational Mechanics, July 2014, Barcelona, Spain.
50. **Kramer, A.K.**, Sinha, A., Barbosa, A.R. (2014). “Cross-Laminated Timber Panels Using Hybrid Poplar.” *57th International Convention of Society of Wood Science and Technology*, Society of Wood Science and Technology, June 23-27, Zvolen, Slovakia, 321-322.
51. Conte, J. P., Moaveni, B., He, X., and Barbosa, A.R. (2009). “System and Damage Identification Studies of a Seven-Story Reinforced Concrete Building Structure Subjected to Shake Table Tests.” *2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2009)*, The International Association for Computational Mechanics, June 22-24, Rhodes, Greece.

C5.3. Press

1. CBS 8 News, San Diego, California (2017). “Engineers test new building material on world's largest quake simulator. URL: <http://www.cbs8.com/story/35889987/engineers-test-new-building-material-on-worlds-largest-quake-simulator#.WWmaygjItes.twitter> (accessed, 2017/7/31).
2. Chalmers, K., KGW News, Oregon (2017). “Tests show timber buildings do well in quakes”; URL: <http://api.tegna-tv.com/video/v2/play/1283002663400/283/progressive?subscription-key=ad03606241d049e0b478145b70de72e2> (accessed, 2017/7/31).
3. DJC Staff (2017). “DJC announces its Newsmakers for 2017.” *Daily Journal of Commerce Oregon*, January 23, 2017. <https://goo.gl/MVV2aV> (accessed, 2017/7/31).
4. KTVZ News, Oregon (2017). “Test to see how special wood structures fare in quakes Cross-laminated timber to get seismic check.” URL: <http://www.ktvz.com/news/test-to-see-how-special-wood-structures-fare-in-quakes/585971852> (accessed, 2017/7/31).

5. Robbins, G. (2017). "Engineers to simulate 6.7 earthquake at UC San Diego." URL: <http://www.sandiegouniontribune.com/news/science/sd-me-earthquake-test-20170712-story.html> (accessed, 2017/7/31).
6. NBC 10 News, San Diego, California (2017). "Researchers studying whether wood can stand up to Mother Nature's worst earthquakes." URL: <http://www.10news.com/news/researchers-studying-whether-wood-can-stand-up-to-mother-natures-worst-earthquakes> (accessed, 2017/7/31).
7. Liu (2017). "U.S. study to test seismic performance of innovative cross-laminated timber structure." URL: http://news.xinhuanet.com/english/2017-07/12/c_136436796.htm (accessed, 2017/7/31).
8. Kipfer, A. (2017). Two-story cross-laminated timber structure simulated with 6.7 earthquake <http://www.woodworkingnetwork.com/two-story-cross-laminated-timber-simulated-67-earthquake> (accessed, 2017/7/31).
9. Macdonald, C. (2017). "Researchers to simulate 1994 LA quake that killed 60 on giant 'shake table' to test design for quakeproof wooden buildings." URL: <http://www.dailymail.co.uk/sciencetech/article-4694416/Researchers-simulate-6-7-quake-test-new-building.html>
10. Oregon State University (2017). "Seismic experiments will test performance of innovative cross-laminated timber structure." URL: <http://www.publicnow.com/view/108F8E7603B0A076E5FC9AEEBE3F338680F8309D> (accessed, 2017/7/31).
11. Sina News Agency (2017). "U.S. study to test seismic performance of innovative cross-laminated timber structure URL: <http://english.sina.com/news/2017-07-12/detail-ifyhyvie1134784.shtml> (accessed, 2017/7/31)
12. Asia Pacific Daily, Xinhua News Agency (2017). "U.S. study to test seismic performance of innovative cross-laminated timber structure." URL: <http://www.apdnews.com/xinhua/696842.html> (accessed, 2017/7/31)
13. Seismic experiments to test performance of CLT structure <https://www.woodbusiness.ca/industry-news/news/seismic-experiments-to-test-performance-of-clt-structure-4340> (accessed, 2017/7/31)
14. U.S. study to test seismic performance of innovative cross-laminated timber structure http://english.ts.cn/Science/content/2017-07/12/content_12725405.htm (accessed, 2017/7/31)
15. U.S. study to test seismic performance of innovative cross-laminated timber structure http://www.china.org.cn/world/Off_the_Wire/2017-07/12/content_41197305.htm (accessed, 2017/7/31)
16. Day, J. (2017). "Sobering Panel on Safety Issues." URL: http://www.gazettetimes.com/news/local/govt-and-politics/sobering-panel-on-seismic-safety-issues/article_42f2a176-ed52-59a8-8603-4b6609856a2a.html (accessed, 2017/6/30)
17. Flaccus, G., Le, P. (2016). "New wood technology may offer hope for struggling timber." Associated Press, <https://goo.gl/snyMNF> (text and video, accessed: 2017/2/19)

This news piece and video was published in several other news outlets including:

- a. New York Times
- b. Boston Herald
- c. Chicago Tribune
- d. Washington Post

- e. Miami Herald
 - f. San Francisco Chronicle
 - g. Seattle Post-Intelligencer
 - h. Several TV stations in Oregon and Washington, e.g. KTVZ <http://www.ktvz.com/>
18. “Top of the tree: The case for wooden skyscrapers is not barking.” (2016). *The Economist*, September 10, 2016, <https://goo.gl/Hh7DIA> (accessed: 2017/2/19).
 19. Post, N. (2016). “SOM's Timber Tower Floor System Passes Muster.” *Engineering News Record (ENR)*, August 31, 2016. <https://goo.gl/kQ3EbK> (accessed: 2017/2/19).
 20. Budds, D. (2016). “FastCoDesign, Timber Skyscrapers Aren't a Fantasy – Here's the Research That Proves It.” August 31, 2016. <https://goo.gl/yv9Gvb> (accessed: 2017/2/19).
 21. Lau, W. (2016). “Testing a New Composite System for Tall Timber.” *Architect Magazine*, August 31, 2016. <https://goo.gl/e1qqGM> (accessed: 2017/2/19).
 22. Andrews, G. (2016). “Putting Innovation to the Test.” *Daily Journal of Commerce*.” April 13, 2016. <https://goo.gl/DZCqav> (accessed: 2017/2/19).
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 24. The Oregon State Engineer (2015). “Preparing for the Really Big One” and “Listing of Endowed Positions and Professors.” <https://goo.gl/j5Ri5E> (accessed: 2017/2/19)
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 31. OSU Building Together, Industry Newsletter, (2012). “Welcome New Faculty.” <https://goo.gl/P3QHEP> (accessed: 2017/6/27)
 32. International Urban Earthquake Engineering Center for Mitigating Seismic Mega Risk (2009). “CUEE/PEER Young Researchers Workshop.” <https://goo.gl/QNPwzM> (accessed: 2017/6/27).
 33. PEER NEWS, (2009). “PEER Students attend CUEE Conference and Visit E-Defense Shaking Table in Japan.” https://apps.peer.berkeley.edu/news/2009/peer_students_japan.html (accessed: 2022/1/2).

C5.4. Guest Lectures and Other Presentations

1. Barbosa, A.R. (2015). “Earthquake and Tsunami Loss Assessment.” *University of Porto, Faculdade de Engenharia*, November 2015.

2. Barbosa, A.R. (2015). “PEER-EERI-GEER Reconnaissance Briefing on the April 25, 2015 Nepal Earthquake.” *UC Berkeley and live broadcast to the world* (presentation paper and video copy available online)
3. Barbosa, A.R. (2014). “EERI-PEER Reconnaissance Briefing on the August 24, 2014 South Napa Earthquake.” *UC Berkeley and live broadcast to the world* (presentation paper and video copy available online)
4. Barbosa, A.R. (2014). “EERI-PEER Reconnaissance Briefing on the August 24, 2014 South Napa Earthquake.” *UC Berkeley and live broadcast to the world* (presentation paper and video copy available online)
5. Barbosa, A.R. and Ashford, S. (2014). “Lessons Learned from Recent Earthquakes: Implications for Oregon.” *Presentation at the Lane County Utilities Coordinating Council*. November 2014
6. Barbosa, A.R., Birely, A, Hacker, T., Lowes, L., Pordes, R. and Gazorglio, G. (2014). “Integration of Simulation Data within the NEES Project Warehouse – NEES Research.” *NEES Quake Summit*, Anchorage, Alaska, July 2014
7. Barbosa, A.R. (2013). “NEES/OSG: Experiences in the use of “opportunistic” computing resources.” *NEES Quake Summit*, Reno, Nevada, August 2013
8. Barbosa, A.R., Rosario, R., and Neves, L.A.C. (2013). “Modeling of Frame Structures in Fire.” *OpenSees Days 2013*, UC Berkeley, August 2013
9. Barbosa, A.R., Conte, J.P., Restrepo, J.I., Baker, J.W. (2012). “Vector-valued Probabilistic Seismic Hazard Analysis and Probabilistic Seismic Demand Analysis Application to the 13-story NEHRP Reinforced Concrete Frame-Wall Building Design Example.” *PEER Annual Meeting*, Berkeley, CA, August 2012
10. Barbosa, A.R., Conte, J.P., Restrepo, J.I., Baker, J.W. (2011). “High Fidelity Nonlinear Building Simulation and Use of Open Science Grid.” *PEER Annual Meeting*, Berkeley, CA., August 2011

C6. Datasets

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3. Pei, S., van de Lindt, J., Barbosa, A.R., Dolan, J., Berman, J. (2019). “Two-Story Wood Building Test,” in Shake Table Test of a Two-story Mass Timber Building with Post-tensioned Rocking Walls. DesignSafe-CI [publisher], Dataset, <https://doi.org/10.17603/ds2-zcb9-ry11>.
4. Misra, S., Padgett, J., Barbosa, A., Webb, B. (2019). “Post Hazard Functionality of Roadways and Bridges,” DesignSafe-CI [publisher], Dataset, doi:10.17603/ds2-c53f-4338

5. Motley, M., Eberhard, M., Arduino, P., Barbosa, A.R. (2019). “Probabilistic Assessment of Tsunami Forces on Coastal Structures,” DesignSafe-CI [publisher], Dataset, doi:10.17603/ds2-q2w5-0t48
6. Wood, R., Barbosa, A.R., Soti, R., Abdulrahman, L., Olsen, M., Mohammadi, M. (2019). “2015 Nepal Earthquake Data Archive: Nyatapola Temple,” DesignSafe-CI [publisher], Dataset, doi:10.17603/DS2DT3B.
7. Arduino, P., Motley, M., Eberhard, M., Cox, D., Barbosa, A.R., Lomonaco, P. (2018). “NHERI Debris Impact Experiments,” DesignSafe-CI [publisher], Dataset, doi:10.17603/DS2T09V
8. Olsen, M., Wood, R., Gillins, D., Barbosa, A.R., Stavridis, A., Burns, P., Gillins, M., Soti, R., Mohammadi, M., Javadnejad, F., Burchard, C., Allahyari, M., O'Banion, M., Che, E., Ferreira Viana, L., Bose, S. (2017). “Lidar Scans of Reinforced Concrete Building Performance following the April 25, 2015 Nepal Earthquake,” DesignSafe-CI [publisher], Dataset, doi:10.17603/DS2P082

C7. Refereed Publications Submitted and Under Preparation

Archival Journal Papers Submitted

1. Morrell, I., Higgins, C., Sinha, A., Barbosa, A.R. (202x). “Development and Experimental Assessment of Alternative Shear Connectors for Achieving Composite Behavior in Cross-Laminated Timber-Concrete Floor Systems.” ASCE Journal of Structural Engineering. (Submitted Spring 2022).
2. **Alam, M.S.**, Simpson, B., Barbosa, A.R., Jung, J., Parulekar, N. (202x). “Probabilistic Seismic Damage and Loss Assessment Methodology for Wastewater Network Incorporating Modeling Uncertainty and Correlations.” Earthquake Spectra (Submitted Spring 2022).
3. **Alam, M.S.**, Simpson, B., Barbosa, A.R. (202x). “Fragility and Recovery Models for Energy, Water, and Wastewater Systems for Seismic Regional Risk and Resilience Assessment: State-of-the-Art Review and Database.” Natural Hazards Review (Submitted Spring 2022).
4. Reis, C., Barbosa, A.R., Figueiredo, J., Clain, S., Lopes, M., Baptista, M.A. (202x). “Smoothed Particle Hydrodynamics Modeling of Elevated Structures Impacted by Tsunami-like Waves.” Engineering Structures (Submitted Winter 2022).
5. **Bora, S.**, Sinha, A., and Barbosa, A.R. (202x). “Effect of Simulated Rain on Structural Performance of Cross Laminated Timber Angle Bracket Connections.” ASCE Journal of Architectural Engineering (Submitted Spring 2021).
6. **Alam, M.S.**, Barbosa, A.R., Cox, D. T., Park, H., & Duncan, S. (202x). “Parameterized fragility function methodology for near-coast wood residential structure for wave and surge overland flows.” Engineering Structures. (Submitted Fall 2021).

Archival Journal Papers Under Preparation

1. Sinha, A., Barbosa, A.R., Ho, T., Higgins, C., Zimmerman, R. and McDonnell, E. (202x). In-plane compression behavior of Cross Laminated Timber Panels Under Different Strengthening Mechanisms. To be submitted to Journal of Materials in Civil Engineering (Being prepared for submission in Spring 2022).
2. **Rodrigues, L.**, Barbosa, A.R., Sinha, A., Higgins, C., Zimmerman, R., Breneman, S., Pei, S., van de Lindt, J.W., Berman, J., McDonnell, E., Branco, J.M., and Neves, L. (202X).

- “Modeling of cross-laminated timber diaphragms of a full-scale two-story structure tested on a shake-table.” To be Submitted to *Journal of Structural Engineering* (Being prepared for submission in Spring 2022).
3. **Alam, M.S.**, Barbosa, A. R., Scott, M. H., Cox, D. T., & van de Lindt, J. W. (202x). Probabilistic multi-hazard earthquake-tsunami structural fragility and risk assessment framework.” To be Submitted to *Engineering Structures*. (Being prepared for submission in Spring 2022).
 4. **Kameshwar, S., Ribeiro, F.**, Barbosa A.R., and Cox, D.T (202X). “Surrogate modeling based methodology for developing limit state free tsunami building fragility models and performing sensitivity analysis.” To be Submitted to *Structural Safety*. (Being prepared for submission in Summer 2022).
 5. Barbosa, A.R., **Soti, R.**, Sinha A., Higgins C., and Zimmerman R. (202X). “Experimental Studies of CLT Wall Panels.” To be submitted to *ASCE Journal of Structural Engineering*. (Being prepared for submission in Summer 2022).
 6. **Mugabo, I.**, Barbosa, A.R., Riggio, M. (202X). “Dynamic Testing and Characterization of Cross-Laminated Timber Floor Section.” To be submitted to *ASCE Journal of Architectural Engineering* (Being prepared for submission in Summer 2022).
 7. Barbosa, A.R., **Belejo, A.**, and Higgins, C. (202X). “Study of Ground Motion Duration Effects in the Seismic Assessment of Bridges Retrofitted with Titanium Alloy Bars.” To be submitted to *ASCE Journal of Bridge Engineering* (Summer 2022).
 8. Scott, M.H., Barbosa, A.R., and **Alam, M.S.** (202X). “Force-Based Distributed Plasticity Finite-Length Plastic Hinge Elements.” To be submitted to *Computers and Structures* (Being prepared for submission in Summer 2022).
 9. Barbosa, A.R., Conte, J.P., Baker, J.W., and Restrepo, J.I. (202X). “Vector-Valued Probabilistic Seismic Hazard Analysis Using USGS Probabilistic Seismic Hazard Results.” To be Submitted to *Earthquake Spectra* (Being prepared for submission in Summer 2022).
 10. Barbosa, A. R., Conte, J.P., Restrepo, J.I., and Baker, J.W. (202X). “Probabilistic Seismic Demand Analysis of a 13-story RC Frame Wall Building based on Efficient Vector-Valued Probabilistic Seismic Hazard Analysis.” (Being prepared for submission in Summer 2022).
 11. Barbosa, A. R., Conte, J.P., and Restrepo, J.I. (202X). “Three-Dimensional Nonlinear Finite Element Modeling and Earthquake Response Analysis of the 13-Story NEHRP reinforced concrete Frame-Wall Building Example.” To Be Submitted to *ASCE Journal of Structural Engineering* (Being prepared for submission in Summer 2022).
 12. **Rodrigues, L.**, Barbosa, A.R., Branco, J., Neves, L. (202X). “Progressive Collapse Modeling of Multi-Story Timber Buildings.” To be Submitted to *Engineering Structures* (Being prepared for submission in Summer 2022).
 13. **Belejo, A.**, Barbosa, A.R., and Stuedlein, A. (202X). “Impact of Soil-Structure Interaction on the Ground Motion Duration Effects Assessment of Steel Moment Resisting Frame Buildings.” To be submitted to *Engineering Structures* (Being prepared for submission in Summer 2022).

D. Service

D1. University Service

- 2021-2022 CE Teaching and Evaluation Committee (Chair: Armin Stuedlein)
- 2020-2021 CE Teaching and Evaluation Committee (Chair: Armin Stuedlein)
- 2020-2021 CE Ad Hoc P&T committee for Mid-Tenure Review for Bryson Robertson
- 2019-2020 CE Ad Hoc P&T committee for Mid-Tenure Review for Erica Fischer
- 2018-2019 Search committee: TallWood Design Institute Technical Manager (Chair I. MacDonald)
- 2017-2018 College of Engineering Change Team for Diversity, Equity, and Inclusion; College of Engineering (Chair J. McGuire)
- 2017-2018 Search committee for new TDI lab director (Chair I. MacDonald)
- 2017 Technical support to the Dean of COF and University on Peavy Hall Construction Project (Dean Anthony Davis)
- 2016-2017 Structures Faculty Search Committee, School of Civil & Construction Engineering, (Chair I. Burkan)
- 2015-2016 Search Committee for Advanced Wood Products Lab Director, School of Civil & Construction Engineering, (Chair Laurence Schimleck – Wood Science)
- 2014-2015 School Head Search Committee Member, School of Civil & Construction Engineering, (Chair Christine Kelly – COE)
- Scholarship Committee, School of Civil & Construction Engineering, 2014-2015 (Chair J. Ideker)
- 2014 Interim School Head Search Committee Member, School of Civil & Construction Engineering
- 2013-2014 Faculty Search Committee Member, Construction and Engineering Management, School of Civil & Construction Engineering (Chair D. Trejo)
- 2019 Strategic Planning Committee, School of Civil & Construction Engineering (Chair D. Sillars)
- 2012-2013 Faculty Search Committee Member, Structural Engineering, School of Civil & Construction Engineering (Chair J. Gambatese)
- Graduate Committee Representative for several Masters and PhD Theses Defenses

D2. Service to the Profession

D2.1. Journal Editorships

- 2020 – present, Associate Editor, ASCE Journal of Structural Engineering
- 2018, Editor, Advances in Civil Engineering, Special Issue on Natural Hazard Challenges in Civil Engineering (<https://www.hindawi.com/journals/ace/si/510182/>)
- 2015 – present, Scientific Committee, Portuguese Journal of Structural Engineering,

D2.2. Conference and Workshop Organization

- Organization of Session B-C on Hazard Models, Damage Estimation and Functionality; Semi-annual meeting of the *Center for Risk-Based Community Resilience Planning: A NIST-funded Center of Excellence*, 2021.
- Organizing Committee, First European Conference on Opensees, URL: <http://opensees.fe.up.pt/EOSD17/index.html>, June 19-20, 2017, Portugal
- Organizing Committee – OpenSees Days 2014 – Portugal, <http://lese.fe.up.pt/OSDPt2014/>
- Organizing Committee – OpenSees on the Road at Oregon State University Workshop, November 21-22, 2013, Corvallis, Oregon; co-organized with Prof. Michael Scott.

D2.3. Conference Program Committees

- Session co-chair (w/ Craig Davis and Haizhong Wang) and presenter at the ASCE 2018 Fall Convention on “2017 Mexico Earthquakes: Infrastructure, Community Resilience Reconnaissance.” ASCE Fall 2018 Convention, Sponsored by the ASCE Infrastructure Resilience Division, October 2018, Denver, Colorado
- Mini-Symposium 08, co-organizer and chair, ASCE EMI 2018, Engineering Mechanics Institute Conference, Mini-Symposium 22, Computational Modeling in Civil Engineering, June 2018, Cambridge, MA, USA.
- Technical Committee, International Workshop on Computing for Civil Engineering (IWCCE) 2017, sponsored by the Computing Division of American Society of Civil Engineers (ASCE), June 25-27, 2017, Seattle, WA, USA.
- Mini-Symposium 22, co-organizer and chair, ASCE EMI 2017, Engineering Mechanics Institute Conference, Mini-Symposium 22, Computational Modeling in Civil Engineering, June 4-7, 2017, San Diego, CA, USA.
- Chair and co-organizer of session on High-Strength Materials (Seismic Performance and Design), 2017 World Conference of Earthquake Engineering, Santiago, Chile, 2017
- Scientific Committee, CINPAR 2016, 12th International Conference on Structural Repair and Rehabilitation, 26-29 October 2016, Porto, Portugal.
- Mini-Symposium 37, co-organizer and chair, ASCE EMI 2016, Engineering Mechanics Institute Conference, Computational Modeling in Civil Engineering, May 22-25, 2016, San Diego, USA.
- Scientific Committee, International Conference on Earthquake Engineering and Post Disaster Reconstruction Planning, 24-26 April 2016, Bhaktapur, Nepal.
- Panel member on the Cascadia Region Earthquake Readiness Report at the 10th Annual Energy and Construction Best Practices Summit. *10th Annual Energy & Construction Best Practices Summit - Clean Tech. - Washington's WISE Future, Tacoma, WA*, May 29, 2015.
- Session Chair, Performance-based Engineering (Organizer, Michele Barbato, LSU), 11th International Conference on Structural Safety & Reliability (ICOSSAR 2013), June 2013.

D2.4. Reviewing

- National Science Foundation, 2021/2022 submission cycle (PM: Daan Liang)
- National Science Foundation, 2020/2021 submission cycle (PM: Giovanna Biscontin)
- National Science Foundation, 2019/2020 submission cycle (PM: Walter Peacock)

- Head Advisor for Structures Teaching Group, U Bristol (Chair: Erdin Ibraim; 2020-2021)
- National Science Foundation, Hazard Mitigation and Structural Engineering, 2013/2014 submission cycle (PM: Kishor Mehta)
- Strategic Environmental Research and Development Program (SERDP), 2020, SERPD is the Department of Defense's (DoD) environmental research and development program, planned and executed in partnership with the Department of Energy and the Environmental Protection Agency. (PM: Kirsten Lau)
- Other Funding Agencies:
 - 2021, Chile National Research and Development Agency, FONDECYT
 - 2020, Canada Foundation for Innovation, member of proposal review team
 - 2020, Canada Research Coordinating Committee (CRCC), New Frontiers in Research Fund (NFRF)
 - 2020, Romanian-Executive Agency for Higher Education, Research, Development and Innovation Funding (www.uefiscdi.gov.ro)
 - 2020, Chile National Research and Development Agency, FONDECYT
 - 2019, Chile National Research and Development Agency, FONDECYT
 - 2018, Chile National Research and Development Agency, FONDECYT
 - 2018, Kuwait National Science Foundation
 - 2018, Romanian-Executive Agency for Higher Education, Research, Development and Innovation Funding (www.uefiscdi.gov.ro)
 - 2018, Italian-Cineca Min. Dell'Instruzione, Dell'Universita e Della Ricerca (<http://www.cineca.it/en>)
 - 2014, Romanian-Executive Agency for Higher Education, Research, Development and Innovation Funding (www.uefiscdi.gov.ro)
 - 2012, Italian-Cineca Min. Dell'Instruzione, Dell'Universita e Della Ricerca (<http://www.cineca.it/en>)
- Archival Journal Reviewer
 - America Concrete Institute, ACI
 - ASCE Journal of Bridge Engineering
 - ASCE Journal of Engineering Management
 - ASCE Journal of Structural Engineering
 - ASCE Natural Hazards Review
 - Bulletin of Earthquake Engineering
 - Computer and Science
 - Earthquake Engineering and Structural Dynamics
 - Elsevier Fire Structural Journal
 - Engineering Structures
 - Forest Products Journal
 - Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards
 - Journal of Earthquake Engineering
 - Journal of Maderas, Chile

- Journal of Wood Science
- Portuguese Journal of Structural Engineering
- Soil Dynamics and Earthquake Engineering
- Structural Safety
- Refereed Conference Proceedings
 - 2018, 11th National Conference in Earthquake Engineering, Los Angeles, 4 papers
 - 2017, 16th World Conference in Earthquake Engineering, Chile, several abstracts
 - 2016, CINPAR XII International Conference on Structural Repair and Rehabilitation
 - 2014, 10th National Conference in Earthquake Engineering, Alaska, 9 papers
 - 2013, 11th Int. Conf. on Structural Safety & Reliability – ICOSSAR, 3 papers

D2.5. Other

- Professional/Licensed Engineer in Portugal (1999-present).
- Associate Editor of ASCE Journal of Structural Engineering
- Chair of the ASCE SEI Wood Research Committee
- Member of the ASCE SEI Performance-Based Design for Structures Committee
- Member of the ASCE SEI Methods of Monitoring Structural Performance Committee
- Member of the ASCE SEI Advances in Simulation Committee
- Member of the ASCE SEI Seismic Effects for Structures Committee
- American Concrete Institute (ACI), Member, 2014 – present
- Consortium of Universities for Research of Earthquake Engineering (CUREE), Member, 2012 – 2016
- American Society of Civil Engineers (ASCE), Member, 2008 – present

D3. Service to the Public

D3.1. Professionally Related

- 2019-2022: Task Group 18 Member, Design Requirements for Infrastructure Resilience, International Association for Bridge and Structural Engineering, <https://iabse.org/Committees/Technical-Groups/Task-Groups/Task-Group-18>
- Appraiser for the Oregon CLT Design Contest (2016), <http://oregonbest.org/what-we-offer/expertise/competitions/clt/>
- Mass-timber Conference (2016), Construction Lessons Learned, Track leader and panel moderator <https://www.masstimberconference.com/2016-home/2016-agenda/>
- Member of the ASCE Infrastructure Resilience Division Disaster Response and Recovery Committee (2015)
- Member of the NEES (2013-2014), Requirements Analysis and Assessment Subcommittee (RAAS)
- NIST GCR 14 917-30 (2013), “Use of High-Strength Reinforcement in Earthquake-Resistant Concrete Structures.” Acknowledgement

- Bridge to the future: End-to-end Simulations and Integration of Simulation Data within the NEES Project Warehouse (2013)
- Oregon Wood Innovation Center (2013), “Bending stiffness and strength of massive (8'x40') engineered timber composites.” (URL: <http://owic.oregonstate.edu/evaluation-massive-timber-composites>, accessed 1/15/2015)
- Open-Source Code Development (OpenSees):
 - Led updates, implementation, and committed three material models in OpenSees for cyclic/earthquake analysis of strength and stiffness degrading force-deformation models:
 - Bilinear model with degradation
 - Peak oriented with degradation
 - Pinching material with degradation
 - Updated examples for dynamic analysis of 2-Story moment resisting frame: http://opensees.berkeley.edu/wiki/index.php/Dynamic_Analysis_of_2-Story_Moment_Frame
- Oregon Resilience Plan (2012). Participated in the Critical Buildings Task Group; served as Resource Manager, and co-authored the section on Critical Buildings. Available online at: http://www.oregon.gov/OMD/OEM/osspace/docs/Oregon_Resilience_Plan_Final.pdf
- Led the Production-demo Phase of Integration of the Network for Earthquake Engineering Simulation (NEES) running OpenSees on the Open Science Grid, <https://twiki.opensciencegrid.org/bin/view/Engagement/EngageOpenSeesProductionDemo>

D3.2. Non-Professionally Related

- Volunteer and Appraiser for Destination Imagination (2016, 2017, 2018)
- Currently working on the development of an Incentive Program for Improving Resilience of Downtown Corvallis (w/ Cathy Kerr, Historic Resources Commission, City of Corvallis).

Media

- [Daily Journal of Commerce Oregon, January 23, 2017. https://goo.gl/MVV2aV](https://goo.gl/MVV2aV) (accessed: 2017/2/19).
- <http://www.enr.com/articles/40146-soms-timber-tower-floor-system-passes-muster>
- https://twitter.com/benjohnson_som/status/766345362537783296
- <https://www.fastcodesign.com/3062920/timber-skyscrapers-arent-sci-fi-heres-the-research-that-proves-it>
- <http://archpaper.tumblr.com/post/149700102878/working-with-oregon-state-university-osu>
- <http://archpaper.com/2016/08/som-timber-tower-technology/#gallery-0-slide-0>
- http://www.architectmagazine.com/technology/q-a-soms-benton-johnson-on-testing-a-new-composite-system-for-tall-timber_o

E. Awards

E1. National and International Awards

Best Journal Paper in Structural Hazards, ASCE Journal of Structural Engineering, 2017

Invited Young Researcher, Tokyo Tech, Japan, CUEE/PEER Young Research Workshop, Mar. 2009

NEES Graduate Summer Internship (NEES GSI) Program, August, 2008 at the San Diego Supercomputer Center (SDSC) at the University of California, San Diego (UCSD)

Ph.D. scholarship by the Fundação para a Ciência e a Tecnologia for performing Ph.D. studies at UCSD – BD/17266/2004 – Portugal

M.S. scholarship by the Fundação para a Ciência e a Tecnologia – Portugal

E2. State and Regional Awards

2017 State of Oregon Daily Journal of Commerce Newsmaker for contributions to the Cross-Laminated Timber Industry in Oregon.

2014 Recognition by State of Oregon Senator's office for contributions to the development of the Oregon Resilience Plan in 2013.

E3. University or Community Awards

2017 Award for Research Excellence, School of Civil and Construction Engineering
(<http://bit.ly/2gBNAAE>)

2014-2017 Kearney Faculty Scholar for Outstanding Achievements by an Assistant Professor