

ANDRE R. BARBOSA, Ph.D., P.E.*
Cecil and Sally Drinkward Professor in Structural Engineering
School of Civil and Construction Engineering
Oregon State University
E-mail: barbosa@oregonstate.edu; Cell: +1-541-745-8416
*Portugal, O.E. 37775

Table of Contents

A. EDUCATION AND EMPLOYMENT INFORMATION	2
A1. Education	2
A2. Professional Experience	2
B. TEACHING, ADVISING, AND OTHER ASSIGNMENTS	3
B1. Instructional Summary	3
B2. Student (eSet) and Participant/Client Evaluations	7
B3. Advising	8
B4. Other Assignments	14
C. SCHOLARSHIP AND CREATIVE ACTIVITY	15
C1. Publications	15
C2. Professional Meetings, Symposia, and Conferences	31
C3. Grant and Contract Support.....	37
C4. Patents Filed and In Process.....	42
C5. Other Scholarship and Creative Activities	42
C6. Datasets	49
D. SERVICE.....	50
D1. University Service.....	50
D2. Service to the Profession.....	50
D3. Service to the Public	53
E. AWARDS	55
E1. National and International Awards.....	55
E2. State and Regional Awards	55
E3. University or Community Awards	55

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

09/2024 – present	Cecil and Sally Drinkward Professor in Structural Engineering School of Civil and Construction Engineering Oregon State University, USA
06/2023 – 09/24	Glenn Willis Holcomb Professor in Structural Engineering School of Civil and Construction Engineering Oregon State University, USA
09/2022 – Present	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
09/2018 – 08/2022	Associate Professor School of Civil and Construction Engineering Oregon State University, USA
12/2011 – 09/2018	Kearney Faculty Scholar, Assistant Professor School of Civil and Construction Engineering 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	Prob. Based Anal. & 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	Prob. Based Anal. & 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
CE 589	Structural Theory II (U)	Winter 2022	4	99
CE 382	Structural Theory II (U)	Spring 2022	4	38
CE 580	Performance-based Design (G)	Fall 2022	3	8
CE 382	Structural Theory II (U)	Winter 2023	4	78
CE 589	Seismic Design (G)	Spring 2023	4	6
CE 382	Structural Theory II (U)	Spring 2024	4	48
CE 589	Seismic Design (G)	Spring 2024	4	19
CE 484/584	Wood Design (U/G)	Winter 2025	4	39

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 the 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 the graduate teaching assistants and I 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 homework, 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 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 the 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 was 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 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) Name	Term	Enroll- ment	# Respo nses	Student Evaluation (#1/#2)*	Require d /Elective
CE 534 (4) Structural Dynamics	Winter 2012	12	11	5.6/5.6	Elective
CE 419 (4) Capstone	Spring 2012	30	23	3.1/3.1	Required
CE 382 (4) Structural Theory 2	Winter 2013	104	53	4.0/4.2	Required
CE 580 (3) Performance-based Design	Spring 2013	18	12	4.3/5.0	Elective
CE 534 (4) Structural Dynamics	Fall 2013	16	14	5.2/5.5	Elective
CE 382 Sec. 1 (4) Structural Theory 2	Winter 2014	57	51	4.7/5.0	Required
CE 382 Sec. 2 (4) Structural Theory 2	Winter 2014	60	54	4.7/5.0	Required
CE 588 (4) Prob. Based Anal. & Design	Spring 2014	18	16	5.3/5.5	Elective
CE 534 (4) Structural Dynamics	Fall 2014	20	17	5.4/5.7	Elective
CE 382 Sec. 1 (4) Structural Theory 2	Winter 2015	66	59	5.0/5.1	Required
CE 382 Sec. 2 (4) Structural Theory 2	Winter 2015	29	23	5.5/5.6	Required
CE 580 (3) Performance Based Design	Spring 2015	7	5	6.0/6.0	Elective

CE 588 (4) Prob. Based Anal. & Design	Winter 2016	11	9	4.7/5.3	Elective
CE 580 (3) Performance Based Design	Spring 2016	9	7	5.0/5.3	Elective
CE 382 (4) Structural Theory 2	Spring 2016	55	42	4.8/5.0	Required
CE 534 (4) Structural Dynamics	Winter 2017	20	19	5.1/5.7	Elective
CE 382 (4) Structural Theory 2	Spring 2017	46	34	5.3/5.2	Required
CE 534 (4) Structural Dynamics	Winter 2018	17	9	5.9/5.9	Elective
CE 382 (4) Structural Theory 2	Winter 2018	61	25	5.1/5.3	Required
CE 580 (3) Performance Based Design	Spring 2018	14	5	5.7/5.7	Elective
CE 382 (4) Structural Theory 2	Spring 2018	47	14	4.4/4.6	Required
CEM 383 (4) Structures 2	Fall 2018	111	43	5.5/5.5	Required
CE 382 (4) Structural Theory 2	Winter 2021	75	24	4.4/4.4	Required
CE 538 (4) Struct. Reliability and Risk	Winter 2021	8	6	4.0/4.4	Elective
CE 580 (3) Perf. Based Seismic Design	Spring 2021	3	--	No SET	Elective
CE 645 (4) Wave Forces	Spring 2021	5	--	No SET	Elective
CE 589 (3) Structural Theory 2	Winter 2022	99	24	5.7/5.6	Required
CE 382 (4) Structural Theory 2	Spring 2022	38	12	6.0/5.7	Required
CE 580 (3) Perf. Based Seismic Design	Fall 2022	8	4	5.9/5.8	Elective
CE 382 (4) Structural Theory 2	Winter 2023	78	15	5.8/5.8	Required
CE 589 (3) Seismic Design	Spring 2023	6	2	5.8/5.8	Elective
CE 382 (4) Structural Theory 2	Spring 2024	48	6	4.3/3.0	Required
CE 589 (3) Seismic Design	Spring 2024	19	8	4.2/4.2	Elective
CE 484/584 (4) Wood Design	Winter 2025	39	6	6.0/6.0	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. Gustavo Fernando Orozco Orozco	Ph.D	<i>Performance-based seismic design for multi-story building retrofit using mass timber walls</i>	Fall 2024
2. Steven Kontra (co-advised A. Sinha, WSE)	M.S.	<i>Glued-in Rods for Mass Timber Shear Wall Panel Splicing: Design, Implementation, and Performance</i>	Spring 2024
3. Nicholas Thielsen (co-advised A. Sinha, WSE)	M.S.	<i>Design and Experimental Testing of a Coupled Veneer Laminated Timber Self-Centering Rocking Wall with U-Shaped Flexural Plate Dissipators</i>	Spring 2024
4. Jacob Gesh (co-advised M. Riggio, WSE)	M.S.	<i>Influence of Uncertainties in Terrestrial Laser Scanning on Structural Reliability and Bridge Load Rating</i>	Spring 2023

5. Carly Diehl (Loving) (co-advised M. Olsen, Geomatics)	M.S.	<i>Influence of Uncertainties in Terrestrial Laser Scanning on Structural Reliability and Bridge Load Rating</i>	Spring 2022
6. 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
7. 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
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. Mohammad Shafiqul Alam	Ph.D.	<i>Probabilistic Multi-hazard Earthquake-Tsunami Structural Risk Assessment Framework</i>	Spring 2019
18. 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

19. 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
20. Nicolas Matus (co-advised D. Trejo, CCE)	M.S.	<i>Performance of High-Strength Steel Reinforcement in Shear Friction Applications.</i>	Summer 2018
21. Rajendra Soti	Ph.D.	<i>Seismic Assessment of Unreinforced and Retrofitted Masonry Buildings using the Applied Element Method</i>	Fall 2017
22. 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
23. Vahid MahdaviFar (co-advised A. Sinha, WSE)	Ph.D.	<i>Cyclic Performance of Connections Used in Hybrid Cross-Laminated Timber</i>	Spring 2017
24. 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
25. Curtis Blank	M.S.	<i>Performance Based Tests on Cross Laminated Timber - Concrete Composite Floor Panels</i>	Summer 2016
26. Syed Baqir Hussain	M.S.	<i>Evaluation of seismic response directional combination rules for existing plan irregular reinforced concrete buildings</i>	Summer 2016
27. 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
28. Drew Nielson (co-advised D. Trejo, CCE)	M.S.	<i>High-strength reinforcement for bridges</i>	Spring 2015
29. Amrutha Das (co-advised J. Gambatese, CCE)	M.S.	<i>Risk and Reliability Associated with Use and Reuse of Vertical Formwork</i>	Spring 2014
30. 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
31. 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
32. Anthonie Kramer (co-advised A. Sinha, WSE)	M.S.	<i>Cross-Laminated Timber Engineering: Improvement and Application</i>	Winter 2014
33. Jessica Cawley (co-advised H. Yeh, CCE)	M.S.	<i>Review of Guidelines for the Design of Tsunami Vertical Evacuation Buildings</i>	Winter 2014
34. Garlan Ramadhan	M.S.	<i>Seismic Performance of Diagrid Steel Structures Using Single and Double Friction Mass Dampers</i>	Fall 2013

35. Kyle Romney (co-advised H. Ben Mason, CCE)	M.S.	<i>Soil-bridge Interaction during Long-Duration Earthquake Motions</i>	Spring 2013
36. 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. Emmanuel Randle	Ph.D.	Spring 2029	N
2. Jorge Romero	Ph.D.	Fall 2027	N
3. Tanner Field (co-advised Arijit Sinha)	Ph.D.	Fall 2026	N
4. Patricio Uarac (co-advised Arijit Sinha)	Ph.D.	Spring 2025	Y
5. Franklin (Fabian) Lucero	M.S.	Spring 2025	N/A
6. Daiki Hinata (co-advised Arijit Sinha)	M.S.	Spring 2025	N/A
7. Camila Sales	M.S.	Spring 2025	N/A
8. Kristian Walker (co-advised Jason Ideker)	M.S.	Spring 2025	N/A
9. Jose Sanchez	M.Eng.	Spring 2025	N/A
10. Eric Chen	AMP/M.S.	Spring 2026	N/A
11. Justin David	AMP/M.S.	Spring 2026	N/A
12. Jason Bernal	AMP/M.S.	Spring 2026	N/A
13. Alaina Keller	AMP/M.S.	Spring 2027	N/A
14. Dylan Goff	AMP/M.S.	Spring 2027	N/A

B3.3. Graduate Thesis or Project Committees

MEng Advisor:

Graduated

1. Ian Herr, 2025
2. Wei-Hsuen Lee, 2019
3. Ignace Mugabo, 2018
4. Brian DeMeza, 2018
5. Matthew Kessler, 2016

Minor Professor or Committee Member:

Graduated

1. Ming Chen, Ph.D., 2023
2. Julie Liu, Ph.D., 2022
3. Ian Morrell, Ph.D., 2023
4. Jon Huffman, Ph.D., 2020
5. Annabel Shepard, M.S., 2020
6. Stefanie Schulze, M.S., 2020
7. Matt Barner, Ph.D., 2019
8. Christopher Anderson, M.S., 2019
9. Morvarid Dilmaghani, M.S., 2019

10. Dillon Fitzgerald, Ph.D., 2019
11. Lei Zhang, Ph.D., 2017
12. Junhui Lou, Ph.D., 2017
13. Qiang Li, Ph.D., 2017
14. Aiyad Alshimaysawee, M.S., 2017
15. Silas Shields, M.S., 2017
16. Kyle Sullivan, M.S., 2017
17. Thanh Huynh, M.S., 2016
18. Jonathan Knudtsen, M.S., 2016
19. Benjamin Hunter, M.S., 2016
20. William M. Short, M.S., 2016
21. Wennan Li, M.S., 2016
22. Blake Larkin, M.S., 2016
23. Hyongsu Park, Ph.D., 2016
24. Andrew Hanek, M.S., 2014
25. Therese Pflaum, M.S., 2013
26. Nataliya Kozlova, M.Eng., 2013
27. Anthony Sorentino, M.S., 2012
28. Kathryn Pfretzschner, M.S., 2012
29. Anthony Hafner, M.S., 2012
30. David Taylor, Undergraduate University Honors Thesis, 2012
31. Christina Garrett, Undergraduate University Honors Thesis, 2012

Current

32. Sonia Sehsaz, Ph.D. (Civil Engineering)
33. Mahan Samiadel, Ph.D. (Civil Engineering)
34. Erick Daniel Moreno Rangel, Ph.D. (Civil 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. Natalie Neumayer (Winter 2025 – Present), Sophomore
2. Erik Vargas (Winter 2025 – Present), Senior
3. Katelyn L Hackenberg (Fall 2024– Present), Senior
4. Justin David (Spring 2024– Present), Senior
5. Ian Herr (Spring 2023 – Fall 2024), Senior
6. Kalei Kittleson, (Spring 2022 – Fall 2023), Senior
7. Kristian Walker (Spring 2022 – Fall 2023), Junior / Senior

8. Tanner Field (Spring 2021 – Fall 2022), Senior
9. Nada Aldaber (Spring 2021 – Winter 2022), Senior
10. Lance Parson (Fall 2015 – Fall 2019), Senior
11. Miguel Leon (Fall 2018 – Spring 2019), Senior
12. Joel Turner (Fall 2018 – Spring 2019), Senior
13. Luis Gonzalez (Fall 2017 – Spring 2019), Sophomore
14. Zeping Liu (Summer 2017)
15. Gokul Vasudevan (Summer 2017)
16. Glen Galant (Winter 2017 – Summer 2018)
17. Christopher Anderson (Fall 2016 – Summer 2017)
18. Kirsten Fox (Summer 2016 – Summer 2018)
19. Brad Taylor (Summer 2016 – Spring 2017)
20. Elshae Tanimoto (Summer 2016 – Winter 2017)
21. Amy McKee (Fall 2015)
22. Kyle Logan (Spring 2015 – Spring 2016)
23. Kaitlyn Dorr (Spring 2015)
24. Vandad Mazarei (Winter 2015 – Spring 2015)
25. Sam Gardner (Summer 2014 – Winter 2015)
26. Matthew Kessler (Winter 2014 – Winter 2015)
27. Paul Schroeder (Winter 2014 – Winter 2015)
28. Gabriel Asch (Winter 2014 – Winter 2015)
29. Kristina Milaj (Winter 2014)
30. Nicholas James Mc Elmurry (Fall 2013)
31. Huijing (Sheela) Wang (Fall 2013)
32. Cody Tibbits (Summer 2013 – Winter 2015)
33. Amy Kordosky (Winter 2013)
34. Anthonie Kramer (Spring – Summer 2012)

B3.5. Postdoctoral Trainees

1. Erick R Velasco Reyes, Ph.D. (June 2024 - Present)
2. Gustavo Savaris, Ph.D. (April 2023 – March 2024) – Professor at Federal University of Technology - Paraná/Brazil
3. Claudia Reis, Ph.D. (March 2023 – December 2023) – Currently an Assistant Professor at Lehigh University.
4. Mehrdad Memari, Ph.D. (August 2021 – Aug. 2023) – Currently an Assistant Professor at University of Rhode Island.
5. Mohammad Shafiqul Alam, Ph.D. (June 2019 – November 2021) – Currently a faculty member at University of Hawaii.
6. Sabarethinam Kameshwar, Ph.D. (September 2017 – July 2019) – Currently a faculty member at Louisiana State University.
7. Rajendra Soti, Ph.D. (December 2017 – December 2018) – Currently at Jacobs Engineering in Corvallis, OR.

B3.6. Other Advising

Faculty Advisor

ASCE/SEI Student Chapter (Fall 2023– present)

Earthquake Engineering Research Institute Chapter (2015 – 2018)

Visiting Scholars

1. Soichi Nakashima, Visiting Professor, Building Research Institute, Japan (2025)
2. Giovanni Andrés Gattoni Muñoz, Ph.D., University of Pontificia Chile, Chile (2025)
3. Gustavo Savaris, Ph.D., Associate Professor at Federal University of Technology - Paraná/Brazil (UTFPR) (2023 and 2024).
4. Fabio Romano, Ph.D., Univ. d. Studi Niccolò Cusano, Italy (Spring & Summer 2018).

5. Leonardo Rodrigues, Ph.D., University of Minho, Portugal (Winter & Spring 2017).
6. Gerald Jaho, MS, University of Genoa, Italy (Fall 2016 – Winter 2017).
7. Emanuele Aldo Mortola, MS, University of Genoa, Italy (Fall 2016 – Winter 2017).
8. Alessandro Rizzi, MS, University of Torino, Italy (Spring 2016 – Summer 2016).
9. Micaela Cappozzo, MS, University of Torino, Italy (Spring 2016 – Summer 2016).
10. Milena Massari, Ph.D., University of Bologna, Italy (Fall 2015 – Spring 2016).
11. Luís Miranda, Visiting Scholar, LNEC, Lisbon, Portugal (Fall 2014).
12. Filipe Ribeiro, Ph.D., Universidade Nova de Lisboa, Portugal (Spring 2013).

Co-advisor of Students Enrolled at Other Institutions:

Ph.D. Students

1. Robin Werngren Karlsson, Linneaus University, Sweden (2024 – 2027).
2. Giuseppe Di Dieco, Ph.D., University of Bristol, United Kingdom (2020 – 2023).
3. Dominika Malkowska, Ph.D., University of Bristol, United Kingdom (2019 – 2022).
4. Fabio Romano, Ph.D., Univ. degli Studi Niccolò Cusano, Italy (2017 – 2019).
5. Leonardo Rodrigues, Ph.D. Student, University of Minho, Portugal (2015 – 2019).
6. Jamil Haddad, Ph.D., University of Genoa, Italy (2014 – 2018).
7. Luís Miranda, Visiting Ph.D. Student, LNEC, Lisbon, Portugal (2014 – 2018).
8. Milena Massari, Ph.D., University of Bologna, Italy (2014 – 2017).
9. Filipe Ribeiro, Ph.D., Universidade Nova de Lisboa, Portugal (2012 – 2017).
10. Eliyar Asgarieh, Ph.D., Tufts University, MA, USA (2012 – 2015).

M.S. Students

1. Jacob Andlow, Linneaus University, Sweden (2024 – 2025).
2. Leiyiming Tao, Ms.c, University of Bristol, United Kingdom (2019 – 2020).
3. Yawang Fan, Ms.c, University of Bristol, United Kingdom (2018-2019).
4. Sam White, M.S., Washington State University (2017 – 2019).
5. Hanshun Yu, M.S., Tufts University, MA, USA (2014 – 2016).
6. Ruben Rosario, M.S., Universidade Nova de Lisboa, Portugal (2013 – 2014).
7. Filipe Ribeiro, M.S., Universidade Nova de Lisboa, Portugal (2012).
8. Khaled Mashfiq, M.S., Sapienza University of Rome, Italy (2012).

B4. Other Assignments

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

C. Scholarship and Creative Activity

C1. Publications

In bold font I have indicated students for which I served 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., Benzon 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 vulnerabilità sismica di edifici esistenti in concreto armato*, edited by E. Cosenza, G. Manfredi, G. Monti, Polimetria International Scientific Publisher Monza/Italy, 331-338. ISBN: 8876991298, 9788876991295.

C1.2. Refereed Journal Publications (111 journal publications)

2025

1. Bhatta, J., Mishara, P., Cook, D.T., Sattar, S., **Barbosa, A.R.**, van de Lindt, J.W. (2025). “Seismic response of pressurized full-scale fire sprinkler piping system in six-story building.” *Journal of Earthquake Engineering*. 10.1080/13632469.2025.2470335. In-press.
2. Araujo, G., Simpson, B., Barbosa, A., Pieroni, L., Ho, T., Orozco, G. Miyamoto, B., Sinha, A. (2025). “Experimental and Numerical Simulation of a Three-Story Mass Timber Building with a Pivoting Wall and Buckling-Restrained Boundary Elements”, *J. Struct. Eng.* In-press.
3. Figueira, S.A., **Amini, M.**, Cox, D. T. & Barbosa, A. R. (2025). Virtual Structural Damage Assessment of Buildings in Fort Myers Beach, FL Subject to Impact from Hurricane Ian (2022)”. *Natural Hazards Review*. 10.1061/NHREFO/NHENG-2310
4. **Kontra, S.**, Barbosa, A., Sinha, A., Mishra, P., McBain, M., Pei, S., van de Lindt, J.W., Simpson, B. (2025). “Whole Building Life Cycle Assessment in the Built Environment: A Ten- and Six-Story Shake-Table Test Building Case Study” *Forest Products Journal*, Pg 52-61, DOI: 10.13073/FPJ-D-24-00030R1
5. Han, X., Koliou, M. and Barbosa, A.R. (2025). “Verification and Validation of Agent-Based Models for Resilience Analysis and Simulation.” *Natural Hazards Review*, 26(1), p.04024059.
6. Ji, R., Sorosh, S., Lo, E., Norton, T.J., Driscoll, J.W., Kuester, F., Barbosa, A.R., Simpson, B.G. and Hutchinson, T.C. (2025). Application Framework and Optimal Features for UAV-Based Earthquake-Induced Structural Displacement Monitoring. *Algorithms*, 18(2), p.66.

2024

7. **Amini, M.**, Sanderson, D.R., Cox, D.T., Barbosa, A.R. and Rosenheim, N. (2024). “Methodology to incorporate seismic damage and debris to evaluate strategies to reduce life safety risk for multi-hazard earthquake and tsunami.” *Natural Hazards*, 120(10), pp.9187-9222.
8. Morrell, I., Sinha, A., Higgins, C., Tunc, B. and Barbosa, A.R. (2024). “Two-Way Bending Behavior of Cross-Laminated Timber–Concrete Composite Floors with Alternative Shear Connectors.” *Journal of Structural Engineering*, 150(8), p.04024096.
9. Wang, W. L., van de Lindt, J. W., Johnston, B., Crawford, P. S., Yan, G., Dao, T., ... & R. Barbosa, A. (2024). “Application of Multidisciplinary Community Resilience Modeling to Reduce Disaster Risk: Building Back Better.” *Journal of Performance of Constructed Facilities*, 38(3), 04024012.
10. Sinha, A., Barbosa, A.R., Ho, T.X., Zimmerman, R.B. and McDonnell, E. (2024). “Compression Behavior of Cross-Laminated Timber Wall Panels with Different Reinforcement Mechanisms.” *Journal of Materials in Civil Engineering*, 36(8), p.04024223.
11. Makhoul, N., Roohi, M., van de Lindt, J.W., Sousa, H., Santos, L.O., Argyroudou, S., Barbosa, A.R., Derras, B., Gardoni, P., Lee, J.S. and Mitoulis, S. (2024). “Seismic resilience of interdependent built environment for integrating structural health monitoring and emerging technologies in decision-making.” *Structural Engineering International*, 34(1), pp.19-33.
12. **Rodrigues, L.G.**, Barbosa, A.R., Sinha, A., Higgins, C., Breneman, S., Zimmerman, R.B., Pei, S., van de Lindt, J.W., Berman, J.W., Branco, J.M. and Neves, L.C. (2024). “Analytical and Numerical Models for Wind and Seismic Design and Assessment of Mass Timber Diaphragms.” *Journal of Structural Engineering*, 150(2), p.04023229.
13. Morrell, I., Higgins, C., Sinha, A., Barbosa, A.R., **Srivastava, M.** (2024). “Performance Evaluation of Self-Tapping Screws for Use in Mass Timber-Concrete Composite Floor Connections Through Withdrawal from Mass Timber and Concrete Media.” *Journal of Materials in Civil Engineering*, 10.1061/JMCEE7.MTENG-15865.

14. **Reis, C.**, Barbosa, A. R., Baptista, M. A., Lopes, M., & Clain, S. (2024). A numerical methodology for estimating site-specific cascading earthquake and tsunami dynamic loading on critical infrastructure. *International Journal of Disaster Risk Reduction*, 104163.

2023

15. **Field, T.**, Barbosa, A. R., Zimmerman, R. B., Pryor, S., Sinha, A., & Higgins, C. (2023). "Experimental and analytical evaluation of the tension capacity of edgewise connected glued-in rods in mass ply panels." *Construction and Building Materials*, 409, 133853.
16. **Amini, M.**, Jeon, H., Sanderson, D. R., Cox, D. T., Barbosa, A. R., & Cutler, H. (2023). "Integrated Engineering–Economic Analysis for Multi-hazard Damage and Loss Assessment." *Journal of Infrastructure Systems*, 29(4), 04023031.
17. Liu, J., Fischer, E., Barbosa, A.R., Sinha, A. (2023). "Experimental Testing and Numerical Simulation of Timber-Concrete Composite Floors in Fire." *Journal of Structural Engineering*. 149(11) 04023031.
18. **Alam, M. S.**, Barbosa, A. R., Mugabo, I., Cox, D. T., Park, H., Lee, D., & Shin, S. (2023). "Elevated light-frame wood residential building physical and numerical modeling of damage due to hurricane overland surge and waves." *Engineering Structures*, 294, 116774
19. **Alam, M.S.**, Simpson, B., Barbosa, A.R. (2023). "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*. 294, 116774, DOI: 10.1061/NHREFO/NHENG-1661.
20. **Alam, M. S.**, Simpson, B. G., Barbosa, A. R., Jung, J., & Parulekar, N. (2023). "Probabilistic seismic damage and loss assessment methodology for wastewater network incorporating modeling uncertainty and damage correlations." *Earthquake Spectra*, 39(3), 1435-1472.
21. van de Lindt, J.W., Kruse, J., Cox, D.T., Gardoni, P., Lee, J.S., Padgett, J., McAllister, T.P., Barbosa, A.R., Cutler, H., Van Zandt, S., Rosenheim, N., Navarro, C., Sutley, E., Hamideh, S. (2023). "The Interdependent Networked Community Resilience Modeling Environment (IN-CORE)." *Resilient Cities and Structures*, 2 (2), 57-66.
22. van de Lindt, J. W., Barbosa, A. R., & Dong, Y. (2023). "Integrated modeling of cities to improve natural hazards resilience." Editorial. *Resilient Cities and Structures*, 2(2), A1.
23. **Amini, M.**, Sanderson, D. R., Cox, D. T., Barbosa, A.R. (2023). "Methodology to incorporate seismic damage and debris to evaluate strategies to reduce life safety risk for multi-hazard earthquake and tsunami." *Natural Hazards*, 1-36.
24. Morrell, I., Higgins, C., Sinha, A., Barbosa, A.R. (2023). "Experimental Assessment of Alternative Shear Connections in Cross-Laminated Timber-Concrete Floor Systems." *Journal of Structural Engineering*, 149(5), 04023046.

2022

25. Sanderson, D. R., Cox, D. T., **Amini, M.**, Barbosa, A.R. (2022). "Coupled urban change and natural hazard consequence model for community resilience planning." *Earth's Future*, e2022EF003059.
26. **Bora, S.**, Sinha, A., Barbosa, A.R. (2022). "Effect of Short-Term Simulated Rain Exposure on the Performance of Cross-Laminated Timber Angle Bracket Connections." *ASCE Journal of Architectural Engineering*, 28(4), 04022025
27. **Reis, C.**, Barbosa, A.R., Figueiredo, J., Clain, S., Lopes, M., Baptista, M. A. (2022). "Smoothed particle hydrodynamics modeling of elevated structures impacted by tsunami-like waves." *Engineering Structures*, 270, 114851.
28. **Khlef, F.**, 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.

29. 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.
30. **Di Dieco, G.D.**, Barbosa, A.R., Pregnotato, 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>
31. 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.

2021

32. 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.
33. **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
34. **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.
35. 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
36. **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.
37. **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.
38. **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.
39. **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.
40. 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.
41. 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.
42. 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.
43. **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

44. **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 Eqke Eng.* 19, 429–462 (2021). DOI: 10.1007/s10518-020-00994-x.

2020

45. **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.
46. 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.
47. **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.
48. **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.
49. 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.
50. 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.
51. **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.
52. **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.
53. **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.
54. **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.
55. 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.
56. **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.

57. **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.
58. **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.
59. 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.
60. 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.
61. 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.
62. **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
63. **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
64. **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.
65. **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.
66. 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.
67. **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.
68. 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.
69. 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.ijdrr.2019.101076.
70. 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 Geo-environmental Engineering*. Vol. 145, No. 4, pp. 06019001-1-7. DOI: 10.1061/(ASCE)GT.1943-5606.0002039.
71. van de Lindt, J.W., Furley, J., Amini, M.O., Pei, S., Tamagnone, G., Barbosa, A.R., Rammer, D., Line, P., Fragiaco, 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.

72. 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.
73. 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.
74. **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.
75. **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.

2018

76. 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.
77. **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.
78. 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
79. 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
80. 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.
81. **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.
82. 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
83. **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.
84. **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.

2017

85. Barbosa, A.R., Fahnestock, L., Fick, D., Gautam, D., **Soti, R.**, ..., Rodrigues, H. (2017). “Performance of Medium-to-High Rise Reinforced Concrete Frame Buildings with Masonry Infill in

- the 2015 Gorkha Nepal Earthquake.” (2017). *Earthquake Spectra*. Vol. 33, No. S1, pp. S197-S218. DOI: 10.1193/051017EQS087M.
86. Brando, G., Rapone, D., Spacone, E., O’Banion, M., Olsen, M., Barbosa, A.,..., Stravidis, A. (2017). “Damage Reconnaissance of Unreinforced Masonry Bearing Wall Buildings after the 2015 Gorkha, Nepal, Earthquake.” *Earthquake Spectra*. Vol. 33, No. S1, pp. S243-S274. DOI: 10.1193/010817EQS009M.
 87. Wood, R.L., Mohammadi, M.E., Barbosa, A.R., Abdulrahman, L., **Soti, R.**, Kawan, C.K., Shakya, M., Olsen, M.J. (2017). “Damage Assessment and Modeling of the Five-Tiered Pagoda Style Nyatapola Temple.” *Earthquake Spectra*. Vol. 33, No. S1, pp. S377-S384. DOI: 10.1193/121516EQS235M.
 88. **Ribeiro, F.**, Neves, L., Barbosa, A.R. (2017). “Implementation and calibration of finite-length plastic hinge elements for use in seismic structural collapse analysis.” Vol. 21, 8, pg 1197-1219, *Journal of Earthquake Engineering*, DOI: 10.1080/13632469.2015.1036327.
 89. **Belejo, A.**, Barbosa, A.R., Bento, R. (2017). “Influence of Ground Motion Duration on Damage Index-Based Fragility Assessment of a Plan-Asymmetric Non-Ductile Reinforced Concrete Building,” *Elsevier Journal of Engineering Structures*. Volume 151, 15 November 2017, Pages 682-703, DOI: 10.1016/j.engstruct.2017.08.042.
 90. Attary, N., Unnikrishnan, V., van de Lindt, J., Cox, D., and Barbosa, A.R. (2017). “Performance-Based Tsunami Engineering Methodology for Risk Assessment of Structures.” *Engineering Structures*, 141, 676–686. DOI: 10.1016/j.engstruct.2017.03.071.
 91. Barbosa, A.R., Trejo, D., **Nielson, D.** (2017). “Effect of High Strength Steel on Shear Friction Behavior.” *ASCE Journal of Bridge Engineering*, 22 (8). DOI: 10.1061/(ASCE)BE.1943-5592.0001015.
 92. Park, H., Cox, D., Barbosa, A.R. (2017). “Comparison of Inundation Depth and Momentum Flux Based Fragilities for Probabilistic Tsunami Damage Assessment and Uncertainty Analysis.” *Coastal Engineering*, 122, 10-24. DOI: 10.1016/j.coastaleng.2017.01.008.
 93. Li, Q., Stuedlein, A.W., Barbosa, A.R. (2017). “Torsional Load Transfer of Drilled Shaft Foundations.” *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 143(8). DOI: 10.1061/(ASCE)GT.1943-5606.0001701.
 94. **Asgarieh, E.**, Moaveni, B., Barbosa, A.R., Chatzi, E. (2017). “Nonlinear Model Calibration of a Shear Wall Building Using Time and Frequency Data Features.” *Mechanical Systems and Signal Processing*, 85, 236-251. DOI: 10.1016/j.ymssp.2016.07.045.
 95. Park, H., Cox, D., **Alam, M.S.**, Barbosa, A.R. (2017). “Probabilistic Seismic and Tsunami Hazard Analysis Conditioned on a Megathrust Rupture of the Cascadia Subduction Zone.” *Frontiers Built Environment - Earthquake Engineering*, *Mega Quakes: Cascading Earthquake Hazards and Compounding Risks*, 3:32. DOI: 10.3389/fbuil.2017.00032.
 96. Yu, H., **Mohammed M.A.**, Mohammadi, M.E., Moaveni, B., Barbosa A.R., Stavridis, A., Wood, R.L. (2017). “Structural Identification of an 18-Story RC Building in Nepal Using Post-Earthquake Ambient Vibration and Lidar Data.” *Front. Built Environ – Structural Sensing*, 3:11. DOI: 10.3389/fbuil.2017.00011.
 97. Barbosa, A.R., **Ribeiro, F.**, and Neves, L. (2017). “Influence of Earthquake Ground-Motion Duration on Damage Estimation: Application to Steel Moment Resisting Frames.” *Earthquake Engineering & Structural Dynamics*, 46(1), 27–49. DOI: 10.1002/eqe.2769.
 98. **Lostra, M.**, Higgins, C., Barbosa, A.R. (2017). “Seismic Retrofit of Reinforced Concrete Rectangular Bridge Columns Using Titanium Alloy Bars.” *Portuguese Journal of Structural Engineering, Series III* (3), 75-82, URL: <https://goo.gl/xdhFX1>.

2006-2016

99. Attary, N., van de Lindt, J.W., Unnikrishnan, V.U., Barbosa, A.R., and Cox, D.T. (2016). “Methodology for Development of Physics-Based Tsunami Fragilities.” *ASCE Journal of Structural Engineering*,

- 143(5). DOI: 10.1061/(ASCE)ST.1943-541X.0001715.
100. Gidaris, I., Padgett, J., Barbosa, A.R., Chen, S., Cox, D. Webb, B., Cerato, A. (2016). "Multiple-Hazard Fragility and Restoration Models of Highway Bridges for Regional Risk and Resilience Assessment in the U.S.: A State-of-the-art Review." ASCE Journal of Structural Engineering, 143(3). DOI: 10.1061/(ASCE)ST.1943-541X.0001672.
 101. Trejo, D., **Link, T.**, Barbosa, A.R. (2016). "Effect of Reinforcement Grade and Ratio on Seismic Performance of RC Columns." ACI Structural Journal, 113 (05), 907-916.
 102. **Kramer, A.**, Barbosa, A.R., and Sinha, A. (2015). "Performance of Steel Energy Dissipators Connected to Cross-Laminated Timber Wall Panels Subjected to Tension and Cyclic Loading." ASCE Journal of Structural Engineering, 142(4). DOI:10.1061/(ASCE)ST.1943-541X.0001410.
 103. Barbosa, A.R., **Link, T.**, Trejo, D. (2015). "Seismic Performance of High-Strength Steel RC Bridge Columns." ASCE J. Bridge Eng., 21(2). DOI:10.1061/(ASCE)BE.1943-5592.0000769.
 104. **Ribeiro, F.L.A.**, Barbosa, A.R., Scott, M.H., and Neves, L.A.C. (2015). "Deterioration Modeling of Steel Moment Resisting Frames Using Finite-Length Plastic Hinge Force-Based Beam-Column Elements." ASCE Journal of Structural Engineering, 141(2), DOI: 10.1061/(ASCE)ST.1943-541X.0001052, 04014112.
 105. Barbosa, A. R., and **Ramadhan, G.** (2014). "Seismic Performance of a Tall Diagrid Steel Building with Tuned Mass Dampers." International Journal of Innovations in Materials Science and Engineering, 1(2), 90-102.
 106. **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.
 107. **Kramer, A.**, Barbosa, A.R., and Sinha, A. (2014). "Viability of Hybrid Poplar in ANSI Approved Cross-Laminated Timber Applications." ASCE Journal of Materials in Civil Engineering, 26(7). DOI: 10.1061/(ASCE)MT.1943-5533.0000936.
 108. Moaveni, B., Barbosa, A.R., Conte, J. P., and Hemez, F. M. (2014). "Uncertainty analysis of system identification results obtained for a seven-story building slice tested on the UCSD-NEES shake table." Structural Control and Health Monitoring, 21(4), 466-483. DOI: 10.1002/stc.1577.
 109. Faggella, M., Barbosa, A.R., Conte, J. P., Spacone, E., and Restrepo, J. I. (2013). "Probabilistic seismic response analysis of a 3-D reinforced concrete building." Structural Safety, 44, 11-27.
 110. Pestana, A., Alves, T., and Barbosa, A.R. (2013). "Application of Lean Construction Concepts to Manage the Submittal Process in AEC Projects." ASCE J. Manage. Eng., 30(4). DOI: 10.1061/(ASCE)ME.1943-5479.
 111. 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. Archival Journals Submitted and Under Preparation

1. Cavaleiro, F. N., Savaris, G., Bariccati, R. A., Petruski, A., Barbosa, A. R. "Use of Small-Diameter Eucalyptus for Glued Laminated Timber Production." ASCE Journal of Materials in Civil Engineering. Submitted.
2. **Thielsen, N.**, Sinha, A., Barbosa, A.R., Simpson, B., Cheney, D. "Experimental data collected during quasi-static cyclic loading of mass timber lateral force-resisting system tested in a three-story building structure", Data in Brief. Submitted.
3. Gioiella, L., Fabio Micozzi, Morgan McBain, Michele Morici, Alessandro Zona, Andrea Dall'Asta, Barbara G. Simpson, Barbosa, A.R. (202X). "Vision-based monitoring of absolute and relative displacements in multi-story buildings during shake-table tests." Submitted to Structural Control and Health Monitoring, Winter 2025.

4. **Amini, M.**, S. A. Figueira, D. T. Cox, and A. R. Barbosa, A. Luettich, M. V. Bilskie, Z. Cobell. (202X). Vulnerability Analysis and Empirical Structural Damage Fragilities Considering Distance from Shoreline for On-grade Buildings Impacted by Hurricane Surge and Waves. To be Submitted to ASCE Journal of Structural Engineering (to be submitted Winter 2025).
5. **Amini, M.**, S. A. Figueira, D. T. Cox, and A. R. Barbosa, A. Luettich, M. V. Bilskie, Z. Cobell. (202X). Model-Data Validation of the IN-CORE Damage Model for Buildings Impacted by Hurricane Surge and Waves. To be Submitted to Elsevier International Journal of Disaster Risk Reduction (to be submitted Spring 2025).
6. **Uarac P. P. A.**, Sinha, A., Barbosa, A. R., Ho, T. X., Simpson, B. G., Orozco O., G. F., Miyamoto, B. T. (202X). "Structural Testing of a Full-Scale Three-Story Mass Timber Structure with Resilient Post-Tensioned Rocking Walls". Journal of Structural Engineering (to be submitted Winter 2025).
7. **Uarac P. P. A.**, Barbosa, A. R., Sinha, A., van de Lindt, J. W., Simpson, B. G. (202X). Full-Scale Shake Table Testing of a Resilient Six-Story Mass Timber Building with Self-Centering Rocking Walls. Journal of Structural Engineering (to be submitted Summer 2025).
8. **Kontra, S.**, Barbosa, A.R., Zimmerman, R.B., Pryor, S., Higgins, C., Sinha A. (202X). "Experimental and Analytical Evaluation of the Shear Capacity of Edgewise Connected Glued-In Rods in Mass Ply Panels." ASCE Journal of Materials in Civil Engineering (to be submitted Summer 2025).
9. **Kontra, S.**, Barbosa, A. R., and Sinha, A., Pryor, S., Zimmerman R. (202X). "Glued-in Rods for Mass Timber Rocking Wall Splice Connections: Design, Implementation, and Shake-Table Testing in a Six-Story Building." Journal of Structural Engineering (to be submitted Summer 2025).
10. **Orozco, G.**, Barbosa, A.R., Sinha, A., McDonnell, E. (202X). "Finite Element Modeling Validation of Mass Timber (MT) Diaphragms" Journal of Structural Engineering (to be submitted Summer 2025).
11. **Orozco, G.**, Barbosa, A.R., Fretz, M., Sheine, J., Stenson, J., Van Den Wymelenberg, K., Narancic, P., Casey, F. (202X). "Seismic and Energy Retrofit of Multifamily Light-Frame Timber Residential Buildings Using Mass Ply Panel (MPP) Wall Façade System" Journal of Structural Engineering (to be submitted Summer 2025)
12. **Orozco, G.**, Barbosa, A.R., Sinha, A., Simpson, B. G., Araújo R., G. A., Ho, T. X., Uarac, P., Miyamoto, B. T., (202X). "Enhancing Seismic Resilience in Mass Timber Buildings: MPP Rocking Wall, UFP Energy Dissipators, and Self-Centering Systems for Performance Evaluation" Engineering Structures (to be submitted Summer 2025).
13. **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 2025).
14. 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 2025).
15. **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 2025).
16. 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 2025).
17. 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 2025).

18. **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 2025).
19. **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 2025).

C1.4. 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. Shargh, G.B., Barbosa, A. R., Simpson, B., Sinha, A., van de Lindt, J.W. and Brown, N.C. (2024). July. "Multi-Objective Optimization of Cross-Laminated Timber Shear Walls." Proceedings of the 18th World Conference on Earthquake Engineering.
2. Pieroni, L., Araújo R., G. A., Simpson, B., Freddi, F., Mishra, P., **Uarac, P.**, Barbosa, A. R., Sinha, A., van de Lindt, J. W., and Brown, N. (2024). "Estimating First and Higher-Mode Effects for the Design of Rocking Mass Timber Walls with Controlled Overturning Moments." World Conference on Earthquake Engineering, WCEE 2024. Milan, Italy.
3. **Orozco, G.**, Fretz, M., Barbosa, A.R., Stenson, J., Narancic, P., Casey, F., Northcutt, D., Sheine, J., (2024). "Developing an Application for Mass Plywood Panels In Seismic And Energy Wall Retrofits" World Conference on Earthquake Engineering, WCEE, Milan, Italy.
4. **Orozco, G.**, Barbosa, A.R., Fretz, M., Sheine, J., Stenson, J., Van Den Wymelenberg, K., Narancic, P., Casey, F. (2023). "Seismic and Energy Retrofit of Multifamily Light-Frame Timber Residential Buildings Using Mass Ply Panel (MPP) Wall Façade System" World Conference on Timber Engineering, WCTE, Oslo, Norway.
5. **Amini, M.**, Figueira, S.A., Cox, D.T., and Barbosa, A. (2023). "Model-data validation and uncertainty quantification of the IN-CORE and HAZUS-MH damage models for buildings impacted by Hurricane Ian (2022) at Fort Myers Beach, Florida." ASCE Inspire 2023, Arlington, VA, Nov 16 – 18, 2023.
6. **Uarac, P. P. A.**, Barbosa, A. R., Sinha, A., Simpson, B. G., Ho, T. X. (2023). Dynamic Characterization of a Full-Scale Three-Story Mass Timber Building Structure. XII International Conference on Structural Dynamics, Delft, The Netherlands.
7. Ho, T. X., **Uarac, P. P. A.**, Barbosa, A. R., Sinha, A., Simpson, B. G., Araújo R., G. A., Orozco O., G. F. (2023). "Evaluation of Seismic Performance Factors and Fragility Functions for Post-Tensioned Mass Ply Panel Rocking Walls". 13th World Conference on Timber Engineering, Oslo, Norway.
8. Araújo R., G. A., Simpson, B. G., Ho, T. X., **Orozco O., G. F.**, Barbosa, A. R., and Sinha, A. (2023). "Cyclic Testing and Numerical Modeling of a Three-Story Mass-Timber Building with a Pivoting Mass Ply Panel Spine and Buckling-Restrained Energy Dissipators." World Conference on Timber Engineering, WCTEE 2023. Oslo, Norway.
9. Sanderson, D.R., Cox, D.T., Barbosa, A.R., **Amini, M.** (2023). "Coupled agent-based and hazard consequence model for evaluating policies to increase community resilience," Proc. Inspire Conference, Am. Society of Civil Engineers, Washington DC, Nov 16-18, 2023.
10. **Amini, M.**, Appleton Figueira, S., Cox, D. T., and Barbosa, A. R. (2023). "Model-data validation and uncertainty quantification of the IN-CORE and HAZUS-MH damage models for buildings impacted by Hurricane Ian (2022) at Fort Myers Beach, Florida," Proc. Inspire Conference, Am. Society of Civil Engineers, Washington DC, Nov 16-18, 2023.

11. **Orozco, G.**, Ho, T. X., Araújo R., G. A., Barbosa, A.R., Sinha, A., Simpson, B. G., (2022). “Innovative Mass Timber Seismic Lateral Force Resisting Systems: Testing of a Full-scale Three-story Building with Mass Ply Panels (MPP) Rocking Walls.” 12NCEE, Salt Lake City, US.
12. Cox DT, AR Barbosa, H Park, **MS Alam, S Kameshwar**, D Sanderson, **M Amini** (2022) “Community-scale risk assessment to multi-hazard earthquake and tsunami applied to a coastal urban area in the US Pacific Northwest,” 2nd International Conference on Urban Risks, Lisbon.
13. 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.
14. **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.
15. 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.
16. 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.
17. **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.
18. **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.
19. **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.
20. **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.
21. van de Lindt, J.W., Amini, M.O., Furley, J., Pei, S., Tamagnone, G., Barbosa, A.R., Line, P., Rammer, D., Fragiocomo, 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.
22. 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.
23. **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.
24. 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.
25. 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>

26. 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.
27. 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." *IMAC XXXII, A Conference and Exposition on Structural Dynamics*, Society for Experimental Mechanics, Dynamics of Civil Structures, Vol. 4, pp 245-254, Orlando, FL.
28. 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>
29. 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.
30. **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.
31. 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.
32. 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.
33. 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.

C1.5. 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 Congreso 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.” *10º 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.” *10º 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.” *10º 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.” *XVII 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.

C1.6. 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 Porject 14-29. Web Document 223.
10. Varum, H., Arede, A., Vila-Pouca, N., Romao, X., Pauperio, E., Rodrigues, H., Furtado, A.F., Dias-Oliveira, J., Barbosa, A.R. (2016). "Nepal – One Year After the Earthquake. Challenges for Reconstruction" (in Portuguese). Boletim Bimestral of the Autoridade Nacional de Proteccao Civil, 90.
11. Sinha, A., Clauson, M., Muszynski, L., Mahdaviifar, V., Larkin, B., Barbosa, A.R., Gupta, R., (2015). "CLT Prequalification Tests: Part 1: Test results for the first 3 layer CLT panels." Report No. WSE 15-DR1a (updated). Submitted to DR Johnson Co. (John Redfield).
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.
13. Trejo, D., Barbosa, A., Link, T., Eberhard, M. O., Roder, C. W., Lehman, D. E., Stephens, M., Tran, H. V., and Stanton, J. (2014). "New Strategies for Maintaining Post-seismic Operations of Lifeline Corridors." Report No. 2012-M-0001, Pacific Northwest Transportation Consortium (PacTrans).
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.
15. Barbosa, A. R. and Mason, H. B. (2014). "Field Notes from Oregon State University Team - Appendix A of the PEER Report on Preliminary Notes and Observations on the August 24, 2014,

South Napa Earthquake.” Report No. 2014/13, Edited by Kang, G. S. and S. A. Mahin, Pacific Earthquake Engineering.

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, 2014.” EERI Special Earthquake Report.
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 Belejjo)
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, *Ist 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 Mahdavi*)
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 Mahdavi*)
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 Interacção 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 I served as PI or co-PI only. “My share” indicates the amount of funding, if any, over which the I had control.

<i>Agency & Dates</i>	<i>PI (and co-PIs)</i>	<i>Title</i>	<i>Total Budget</i>	<i>My Share</i>
USDA FS WIG 8/24 – 7/26	Moerman, S., Barbosa, A.R.	Determination of seismic performance factors for mass timber brace frames based on FEMA P695 methodology	\$160,000	\$120,000
USDA FS WIG 8/24 – 7/26	Macdonald, I., Barbosa, A.R. ,	Bringing Point-supported Mass Timber Structures to Commercial Viability in the USA	\$598,328	\$298,328
NSF 1/24 – 1/25	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	\$219,997	\$159,997
USFS WIG 9/23 – 9/26	Sheine, J., Barbosa, A.R. , Fretz, M, MacDonald, I.	Mass Timber Prefabricated Panels for Affordable Housing Prototype Development	\$240,000	\$120,000
Pacific Earthquake Engineering Institute 9/23 – 8/26	Barbosa, A.R. , Reis, C.	Cascading seismic and tsunami loads for the design of open-wharves	\$75,000	\$75,000
NSF Regional Innovation Development Award 6/23 – 5/26	Sheine, J., Barbosa, A.R. , MacDonald, I., Englund, K.	Advancing Mass Timber Technologies	\$1,000,000	\$150,000
Oregon Department of Transportation 12/22 – 08/25	Barbosa, A.R. , Ideker, J.	Low-carbon Ultra High-Performance Concrete for Use in Highway Infrastructure	\$400,000	\$270,383
USDA Agricultural Research Service 9/22 – 8/25	Barbosa, A.R. , Fretz, M, Sheine, J., Simpson, B., Sinha, A.	Reuse Potential of Mass Timber Constructions	\$240,000	\$150,000
USDA Agricultural Research Service 9/22 – 8/25	Fretz, M., Barbosa, A.R. , Sheine, J., Van Den Wymelenberg, K.	Forest to Facade: Developing Seismic + Energy Mass Timber Commercial Facade Retrofits	\$210,000	\$120,000

USDA Agricultural Research Service 9/22 – 8/25	Barbosa, A.R. , Simpson, B., Sinha, A.,	Collating experimental data to support the numerical modeling of mass timber systems	\$87,727	\$87,727
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	\$1,350,000	\$656,225
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 8/20-02/23	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	Sinha, A., Barbosa, A.R. , Simpson, B.	Innovative lateral systems for mass timber buildings	\$489,000	\$163,000

9/18 – 8/20				
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	Riggio, M., Barbosa, A.R., Van Den Wymelenberg, K.	SMART-CLT – “Structural Health Monitoring and Post-Occupancy	\$147,497	\$36,874

Research Service 7/16 – 6/19		Performance of Mass Timber Buildings.”		
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			\$32,369,934	\$6,390,743

C3.1. Donations

<i>Year</i>	<i>Source</i>	<i>Donation</i>	<i>Value</i>
2023	Simpson Strong-Tie	Seismic Research on Shake-Table (cash)	\$125,000
2023	CoreBrace	Seismic Research on Shake-Table (cash)	\$250,000
2022	Simpson Strong-Tie	Seismic Research on Shake-Table (cash)	\$226,000
2021	Simpson Strong-Tie	Glued-in Rod in Mass Timber (cash)	\$4,800
2024	19 Different Agencies	Research on Engineering, Architecture and Construction of Timber Structures (REACTS) Consortium - (cash)	\$142,500
2023	19 Different Agencies	Research on Engineering, Architecture and Construction of Timber Structures (REACTS) Consortium - (cash)	\$142,500
2022	18 Different Agencies	Research on Engineering, Architecture and Construction of Timber Structures (REACTS) Consortium - (cash)	\$150,000
2014	Perryman Company	Strengthening of Civil Infrastructure (50% for C. Higgins and 50% my share) (cash)	\$115,000

2012 - 2024	Various companies	Structural Testing of three-story mass timber structure in the Emmerson Lab, as well as several materials donations for structural lab testing	\$500,000
-------------	-------------------	--	-----------

C3.2. Proposals Currently under Review

<i>Agency</i>	<i>PI (and co-PIs)</i>	<i>Title</i>	<i>Budget</i>	<i>Duration</i>

C4. Patents Filed and In Process

1. U.S. Provisional Application Number: 63/513,603, Title: ADAPTABLE KIT FOUNDATION SYSTEM; Filing Date: July 14, 2023; Inventors: Ryan James Tinsley (NREL), Andre Ramos Barbosa (Oregon State University), Priscilla Morris (U.S. Forest Service), Jonathan Bean (NREL); Applicants: Alliance for Sustainable Energy, LLC, Oregon State University, and The United States, as represented by the Secretary of Agriculture, USDA Forest Service; NREL Docket Number: NREL PROV/23-98

C5. Other Scholarship and Creative Activities

C5.1. Conference Abstracts and Guest Lectures

1. Kontra, S., Barbosa, A. R., Field, T., Thielsen, N., Zambrano, S., Hasani, N., and Atkins J., (2024). “Applied Research for Resilient Seismic Design: Six-Story Shake-Table Testing at Full-Scale and Small Scale.” International Mass Timber Conference, Portland, OR. (poster).
2. **Reis, C.**, Barbosa, A. R., Istrati, D., Clain, S., Ferreira, R., Matias, L., and Wirth, E.: Tsunami risk management in the Exascale Era: Global advances and the European standpoint, Galileo Conference: Solid Earth and Geohazards in the Exascale Era, Barcelona, Spain, 23–26 May 2023, GC11-solidearth-24, <https://doi.org/10.5194/egusphere-gc11-solidearth-24>, 2023.
3. **Amini, M.**, Figueira, S.A., Cox, D.T., and Barbosa, A. (2024). “Model-Data Validation of the IN-CORE Damage Model for Buildings Impacted by Hurricane Ian (2022) at Fort Myers Beach, Florida.” 2024 SimCenter Symposium, University of California Los Angeles, Feb 1 – 2, 2024.
4. **Amini, M.**, Figueira, S.A., Cox, D.T., and Barbosa, A. (2023). “Virtual Building Damage Assessment for IN-CORE Hindcast, Hurricane Ian (2022) at Fort Myers Beach, Florida” Center for Risk-Based Community Resilience Semi-Annual All-Center Meeting Webinar, Colorado State University, April 27–28, 2023.
5. **Uarac P. P. A.**, Barbosa, A. R., Sinha, A., Simpson, B. G., van de Lindt, J. W., Brown, N. (2023). “Direct Displacement Design of a Six-story Mass Timber Building With Self-centering Rocking Walls”. International Mass Timber Conference, Portland, USA. (poster).
6. **Kontra, S.**, Barbosa, A. R., Sinha, A., Sheine, J., Fretz, M., Simpson, B. G., Brown, N. C., and van de Lindt, J. W. (2023). “Quantifying GWP Savings for Buildings Featuring Reused Materials: A Ten- and Six-Story Test Structure Case Study.” International Mass Timber Conference, Portland, OR. (poster).
7. **Uarac, P. P. A.**, Barbosa, A. R., Sinha, A., van de Lindt, J. W. (2023). “Self-Centering Rocking Walls on a Mass Timber Building”. University of Nebraska – Lincoln Ph. D. Symposium, Omaha, Nebraska. (presentation).
8. Reis, C., Barbosa, A.R., Lopes, M., Clain, S., Baptista, M.A. (2022). “Coupled FV-SPH Simulations of Tsunami Impacting Critical Infrastructures.” Second International Conference on Urban Risks. ICUR 2022, Lisbon, Portugal.

9. Amini, M., Sanderson, D., Cox, D.T., and Barbosa, A. (2022) "Evaluating Structural Retrofit for Earthquake and Tsunami Risk Reduction for Life Safety and Damage." Center for Risk-Based Community Resilience Semi-Annual All-Center Meeting Webinar, Hilton Washington Dulles Airport, Herndon, VA, Nov 16–17, 2022.
10. Amini, M., Sanderson, D., Cox, D.T., and Barbosa, A. (2022) "Development of Casualty Model for IN-CORE using Seaside Testbed: Life Safety Risk of Nearfield Earthquake and Tsunami." 2022 SimCenter Symposium, University of Texas at Austin, Nov 3–4, 2022.
11. Amini, M., Sanderson, D., Cox, D.T., and Barbosa, A. (2022) "Development of Casualty Model for IN-CORE using Seaside Testbed: Life Safety Risk of Nearfield Earthquake and Tsunami." Engineering Mechanics Institute Conference 2022, Baltimore, Maryland, May 31 – June 3, 2022.
12. Amini, M., Sanderson, D., Cox, D.T., and Barbosa, A. (2022) "Development of Casualty Model for IN-CORE using Seaside Testbed: Life Safety Risk of Nearfield Earthquake and Tsunami." Center for Risk-Based Community Resilience Semi-Annual All-Center Meeting Webinar, Colorado State University, Fort Collins, CO, April 28, 2022.
13. **Kontra, S.**, Araujo R., G. A., Barbosa, A. R., Brown, N. C., Furley, J., Ho, T. X., Mensah, F., **Orozco, G. F.**, Simpson, B. G., Sinha, A., **Uarac, P.**, van de Lindt, J. W., and Zargar, S. H. (2022). Shake-table Testing of a Full-Scale Six-Story Mass Timber Structure. International Mass Timber Conference, Portland, OR. (poster).
14. 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)
15. **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
16. 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)
17. 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
18. **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)
19. **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.
20. 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.
21. **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*
22. 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.
23. 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*

24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. 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.
31. 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
32. 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.
33. 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
34. **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.
35. 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.
36. 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.
37. **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.

38. 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.
39. 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.
40. 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.
41. **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
42. 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).
43. 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.
44. 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.
45. **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.
46. 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.
47. **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.
48. **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.
49. 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.
50. 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.
51. **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.
52. 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.
53. **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.
54. 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.
55. 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.
 56. Barbosa, A.R. (2015). “Earthquake and Tsunami Loss Assessment.” *University of Porto, Faculdade de Engenharia*, November 2015.
 57. 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)
 58. **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.
 59. 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
 60. 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
 61. **Alam, M.**, Barbosa, A.R. (2015). “Modeling Uncertainties in Reinforced Concrete Masonry Infilled Frames.” *Poster, ASCE Structures Congress*, ASCE, Portland, OR.
 62. 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.
 63. Asgarieh, 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.
 64. 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)
 65. 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)
 66. 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
 67. 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
 68. **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.
 69. **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.
 70. Barbosa, A.R. (2013). “NEES/OSG: Experiences in the use of “opportunistic” computing resources.” *NEES Quake Summit*, Reno, Nevada, August 2013
 71. Barbosa, A.R., Rosario, R., and Neves, L.A.C. (2013). “Modeling of Frame Structures in Fire.” *OpenSees Days 2013, UC Berkeley*, August 2013

72. 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
73. 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
74. 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.
75. 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.
76. Barbosa, A.R., Castro, L.M.S.S., (2001). "Wavelets on the Interval - Application to elasticity problems, *Ondelettes et équations aux dérivées partielles*, Luminy, Marseille, France.

C5.2. 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/108F8E7603B0A076E5FC9AE3F338680F8309D> (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-ifyhvyie1134784.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/xin-hua/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).
23. Lynch, P. (2016). "SOM's Timber Tower System Successfully Passes Strength Testing." Archdaily.com, August 18, 2016. <https://goo.gl/AUfKDu> (accessed: 2017/2/19).
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)
25. Mason, H. B. and Barbosa, A. R. (2014). "Napa disaster should offer a timely lesson for Oregonians." The Oregonian, Opinion Editorial, September 5, 2014. Also available online with the title "Napa earthquake argues for better education in Oregon: Guest opinion." <https://goo.gl/BJ8rQj> (accessed: 2017/6/27).
26. NIST GCR 14 917-30 (2014). "Use of High-Strength Reinforcement in Earthquake-Resistant Concrete Structures." Acknowledgement, <https://goo.gl/DtRSfW> (accessed: 2017/6/27).
27. PacTrans News (2014). "Seismic Performance of Concrete Bridge Columns Made with High-Strength Reinforcement." <https://goo.gl/9jDkJB> (accessed: 2017/6/27)
28. Terra (2013). "Oregon 9.0: When the next big one comes, will we be ready?" Spring 2013. <https://goo.gl/ErPb5w> (accessed: 2017/6/27).

29. International Science Grid This Week, (2012). "Earthquake Risks." <https://goo.gl/38TzhK> (accessed: 2017/6/27).
30. Open Science Grid, (2012). "Testimonials." <https://goo.gl/eLjwdX> (accessed: 2017/6/27).
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).

C6. Datasets

1. Cox, D., A. Barbosa, M. Alam, M. Amini, S. Kameshwar, H. Park, D. Sanderson. (2022) "Report", in Seaside Testbed Data Inventory for Infrastructure, Population, and Earthquake-Tsunami Hazard. DesignSafe-CI. <https://doi.org/10.17603/ds2-sp99-xv89> v1
2. Sutley, E., Dillard, M., Hamideh, S., Peacock, W., Tobin, J., Peek, L., Seong, K., Barbosa, A., Tomiczek, T., van de Lindt, J., Gu, D. (2020). "Household Survey Instrument, January 19, 2018: Wave 2," in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. <https://doi.org/10.17603/ds2-db3h-gy28>.
3. Xiao, Y., Watson, M., Helgeson, J., Farokhnia, K., van de Lindt, J., Mitrani-Reiser, J., Sutley, E., Deniz, D., Tomiczek, T., Barbosa, A., Fung, J., Nofal, O., Koliou, M. (2020). "Business Survey Instrument, January 19, 2018: Wave 2," in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. <https://doi.org/10.17603/ds2-f9kt-fm93>.
4. 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>.
5. 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
6. 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
7. 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.
8. 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
9. 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

D. Service

D1. University Service

- 2024-2025 Chair of CE Ad Hoc P&T Committee for Tenure Review for Michael Statek
- 2022-2025 College of Engineering Faculty Status Committee
- 2022-2024 Chair of the School of Civil and Construction Engineering Graduate Committee
- 2022-2023 Member of CE Ad Hoc P&T Committee for Tenure Review for Erica Fischer
- 2021-2024 Convenor of PhD Qualifying Exam in Structural Engineering
- 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)
- 2013 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

- 2023 – present, Associate Editor for Earthquake Engineering. Frontiers in Built Environment
- 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, 2023/2024 submission cycle (PM: Jacqueline Meszaros)
- National Science Foundation, 2022/2023 submission cycle (PM: Jacqueline Meszaros)
- 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'Istruzione, 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'Istruzione, 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
 - International Journal of Impact Engineering
 - 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
- Member of ASCE 7 – 28 Loads Committee
- Member of ASCE 7 – 28 Flood Loads Committee
- Member 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

- 2019-2024: 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/ospac/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> (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

2023 [J. James R. Croes Medal](#) | [ASCE](#)

2023 [DesignSafe Dataset Awards](#) | [DesignSafe-CI](#)

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

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

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

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

1998 **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

2024-2025 Cecil and Sally Drinkward Professor in Structural Engineering

2023-2024 Glenn Willis Holcomb Professor in Structural Engineering

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