

Kara D. Peterman

University of Massachusetts Amherst, Dept. of Civil and Environmental Engineering
230 Marston Hall | 130 Natural Resources Way | Amherst, MA 01003
office: (413) 545-0434 | kdpeterman@umass.edu

EDUCATION

- 2014 Ph.D., *Johns Hopkins University*
Major: Structural Engineering
Dissertation: *Behavior of Full-Scale Cold-Formed Steel Buildings under Seismic Excitations*,
Advisor: Ben Schafer
- 2011 MS, *Johns Hopkins University*
Major: Structural Engineering
Thesis: *Experiments on the Stability of Sheathed Cold-Formed Steel Studs under Axial Load and Bending*, Advisor: Ben Schafer
- 2009 BS, *Swarthmore College*
Major: Engineering, Minor: Statistics
Thesis: *Analysis and Design of Various Medieval Vaulting Technologies*, Advisor: Faruq Siddiqui

RECENT EMPLOYMENT

- 2016-present *Assistant Professor*, Dept. of Civil and Environmental Engineering, University of
Massachusetts Amherst, Amherst, MA

Research Interests: As a member of the Structural Engineering and Mechanics (SEM) group, I focus on cold-formed and hot-rolled steel structures, and their behavior under service loads and extreme loads from natural hazards. Specifically, I use complex and large-scale experiments to shed light on system behavior not otherwise captured by our design codes and specifications, and to examine complex stability modes and their interactions. I aim to provide the fundamental data which transform our understanding of how these systems share load and transmit forces to and from each other. As a researcher and an educator, I seek to motivate my students through modern engineering problems, and empower them to find solutions to the previously unanswerable.

- 2014-2016 *Postdoctoral Research Associate*, Dept. of Civil and Environmental Engineering,
Northeastern University, Boston, MA

At Northeastern University, I worked with Professor and Chair Jerome F. Hajjar on a thermal break strategies project which aimed to provide comprehensive thermal and structural analysis along with full-scale structural testing to both design and validate new thermal break strategies for cladding systems in steel buildings. Our final report to the Charles Pankow Foundation may be downloaded here: <http://www.pankowfoundation.org/grants.cfm>

2009-2014 *Graduate Research Assistant*, Johns Hopkins University, Dept. of Civil Engineering, Baltimore, MD.

During my time at Johns Hopkins, I worked with Professor Benjamin W. Schafer as the experimental graduate research assistant on the NSF-funded CFS-NEES project, which aimed to enable the performance-based seismic design of multi-story cold-formed steel structures. As part of this effort, I conducted connection, shear wall, and two-story building tests (the latter were performed at the twin shake tables at the University of Buffalo SEES Laboratory). Reports, and my PhD dissertation are available here: <https://www.ce.jhu.edu/cfsnees/publications.php>

2009-2011 *Graduate Teaching Assistant*, Dept. of Civil Engineering, Johns Hopkins University, Baltimore, MD.

Courses TAed: Statics and Strength of Materials (200-level), Perspectives on the Evolution of Structures (100-level), Structural Stability (600-level)

RECENT FELLOWSHIPS, HONORS, and AWARDS

2021 *UMass Amherst College of Engineering Outstanding Teacher Award*. This award, given annually to two UMass Amherst Engineering faculty, recognizes accomplishments in teaching based on student letters of recommendation, course reviews, and a teaching pedagogy statement.

2021 *Terry Peshia Early Career Faculty Award*, American Institute for Steel Construction (AISC). The award recognizes tenure-track faculty who demonstrate exceptional promise in the areas of structural steel research, teaching, and other contributions to the structural steel industry.

2021 *McGuire Award for Junior Researchers*, Structural Stability Research Council (SSRC). The MAJR medal is given to early career faculty (<10 years post-PhD) who demonstrate a history of state-of-the-art research in structural stability, and promise as a stability researcher.

2020 *CEE Faculty Service Award*, UMass Amherst Dept. of Civil and Environmental Engineering. In recognition of outstanding contributions to departmental service through departmental committee membership and mentorship of students and faculty.

2020 *ASCE Student Chapter Outstanding Faculty Award*, UMass Amherst Dept. of Civil and Environmental Engineering. This award is given by the UMass Amherst ASCE Student Chapter to a faculty member in recognition of their teaching, research, and undergraduate mentoring.

- 2019 *Outstanding Reviewer, ASCE Journal of Structural Engineering.* Awarded in recognition of the quality and timeliness of reviews during the award year.
- 2018, 2019 *Honorable Mention, McGuire Award for Junior Researchers,* Structural Stability Research Council (SSRC). The MAJR medal is given to early career faculty (<10 years post-PhD) who demonstrate a history of state-of-the-art research in structural stability, and promise as a stability researcher. I received an honorable mention in two consecutive years.
- 2018 *Norman Medal Recipient,* American Society of Civil Engineers (ASCE). The Norman Medal is the highest honor granted by ASCE for a technical paper that "makes a definitive contribution to engineering science." Paper is chosen among submissions from 32 ASCE journals.
- 2017-2018 *Frank 5 Fellow,* Adeylotte Foundation of Swarthmore College, awarded to alumni under the age of 30 to advance the liberal arts.

TEACHING EXPERIENCE / DEVELOPMENT

- 2021-2022 College of Engineering Teaching for Inclusiveness, Diversity, & Equity Accelerator Fellowship

Selected as one of two Engineering Accelerator Fellows to improve CEE 240 Statics. Through the Fellowship year, I will design a lesson plan that will address inequitable access to safe and reliable housing. Specifically, teach students about the systemic issues at the root of housing inequality, and the consequences of unreliable housing under threat of natural hazards. I will use post-disaster reconnaissance data to demonstrate the change in force transfer mechanisms when a home is poorly maintained or designed.

- 2019-2020 Lilly Teaching Fellowship, the Institute for Teaching Excellence and Faculty Development, University of Massachusetts Amherst

Selected as one of eight Lilly Teaching Fellows from across the UMass campus, and the only Fellow in the cohort from the College of Engineering. Through the Fellowship year, I will work to develop a new 500-level course on Unified Structural Design. The purpose of this program is to enable promising early-career faculty to develop and expand their expertise in teaching while pursuing the scholarly activity expected of faculty at a major research university.

- 2019-2020 Sustainability Curriculum Fellowship

Selected as one of 11 Sustainability Curriculum Fellows (SCFs), and the Fellow from the College of Engineering. The SCF Program is designed to support faculty who are interested in enhancing the sustainability learning outcomes in an existing course and/or incorporating one or more learning

outcomes into a new course. Through the fellowship year, I am working to incorporate sustainable design as a fundamental design constraint in structural engineering curriculum.

2016-present Department of Civil and Environmental Engineering, University of Massachusetts
Amherst, Amherst, MA

Courses Instructed:

CEE 240 Statics (Fall 2020, Fall 2021)

CEE 497K/597K Unified Structural Design (Spring 2020, Spring 2021)

CEE 241/MIE 211/BME 297B Strength of Materials (Fall 2016, 2017, Spring 2019)

CEE 241A Strength of Materials Laboratory (Fall 2016, 2017, Spring 2019)

CEE 542 Advanced Topics in Steel Design (Spring 2017, 2018, 2019)

CEE 693/694B Structural Engineering Seminar (Fall 2017, Spring 2018)

August 2018 ASCE ExCEED (Excellence in Civil Engineering Education) Workshop Graduate

The ExCEED workshop is a five day intensive teaching workshop dedicate to civil engineering instruction. As part of this workshop, I attended 13 seminars related to teaching, and prepared and delivered three lectures as part of the workshop. Feedback was provided at regular intervals through teaching evaluations, video recorded lectures, and one-on-one instruction with teaching Mentors. In the workshop, I developed physical models for use in my classrooms, and improved my questioning skills, board work, time management, and classroom assessment techniques.

Winter 2018 Innovate@UMass Symposium

As an innovation Fellow, I attended a four day symposium organized and sponsored by the Institute for Teaching Excellence and Faculty Development, UMass Libraries and Information Technologies. The symposia focused on new ways of structuring student collaboration and teamwork, inclusion of media-creation projects in traditional curricula, and increasing student engagement through content delivery mechanisms.

2016-2019 Teaching Excellence and Faculty Development Flex Grant Awardee

Flex grant awarded to attend the 2016 and 2018 International Center for Cold-Formed Steel Specialty Conference, to collaborate with other educators with the aim of improving the two-week cold-formed steel learning module I teach within CEE 542. Third flex grant awarded to attend educator sessions at 2019 Structures Congress

FUNDED PROJECTS

External to UMass Amherst

[11] Construction & Materials Best Practices for Concrete Sidewalks: Phase 2 – Long-term performance and hot-weather placement effects (*pending* ~\$250,000, PI with Sergio Brena co-PI, 50-50 effort split). Massachusetts Dept. of Transportation, 2021-2023.

[10] Cyclic Performance of Thin Steel Deck Side Lap and Frame Connections (\$12,000, PI). American Iron and Steel Institute and the Steel Deck Institute, 2021

[9] Impact of Edge Distance on the Capacity of Fiber Cement Board-to-Cold Formed Steel Shear Connections (\$50,000, PI). United States Gypsum Corporation, 2021.

[8] Building Resilience in Construction (£10,000, University of Leeds lead institution, co-PI – no funding to UMass). Worldwide Universities Network, 2020 (COVID-19 pandemic pilot research project)

[7] Impact of Attachment Pattern on Out-of-Plane Buckling Strength in Steel Deck (\$10,000 PI). American Iron and Steel Institute, 2020.

[6] Identification of Best Practices to Incorporate into MassDOT Concrete Sidewalks (\$285,285, co-PI with Sergio Brena PI, 50-50 effort split). Massachusetts Dept. of Transportation, 2019-2021.

[5] Stud Bearing on Concrete Slabs Phase II (\$26,500 PI, unrestricted funds). American Iron and Steel Institute, 2019-2020.

[4] Seismic Behavior of Steel Deck Diaphragms (\$100,000, PI). Steel Deck Institute , 2019-2020. Supplemented by \$30,000 in August 2020. (total = \$130,000)

Further supplemented by a cantilever diaphragm test rig donation by Nucor Corp., valued at \$60,000 (note this value is not included in funding totals)

[3] Shake Table Testing of Cold-Formed Steel Diaphragms (\$100,000, PI). American Iron and Steel Institute, 2018-2019.

[2] Thermal Bridging in Cold-Formed Steel Walls (\$6,000, PI). Small Project Fellowship from the American Iron and Steel Institute, 2018.

[1] Stud Bearing on Concrete Slabs Phase I (\$40,000, PI with co-PI Zhanjie Li (SUNY Poly)). American Iron and Steel Institute, 2017-2018.

Internal to UMass Amherst

[3] Design and validation of modularized structural diaphragms for sustainable construction (\$13,000, PI). Robert B. Brack Award for Faculty Advancement, 2019-2020.

[2] Fostering Inclusive Relationships in Civil Infrastructure (\$6,000, PI, with co-PIs Caitlyn Butler, Eleni Christofa, Emily Kumpel, and Song Gao), ADVANCE Mutual Mentoring Grant, 2019-2020

[1] Mutual Mentoring Where No Model Exists (\$6,000, PI, with co-PIs Caitlyn Butler, Eleni Christofa, Emily Kumpel, and Song Gao), TEFD Mutual Mentoring Grant, 2018-2019

Total: \$684,685 + MassDOT Phase 2 (pending ~\$250,000) = \$934,685

ADVISING

PhD Students

Divyansh Kapoor (transitioned to PhD Fall 2019, in progress)
Fani Derveni (graduated May 2021, co-advised with Simos Gerasimidis)
Hernan Castaneda (NEAGEP Fellow, started Fall 2017, in progress)
Abbas Joorabchian (graduated August 2020)

MS Students

Rita Kalo (MS Dec 2018)
Divyansh Kapoor (MS Dec 2019)
Rhyan Sullivan (MS May 2021)

Visiting PhD Students

Federico Gusella (University of Florence, Florence, Italy, Nov. 2017-Apr. 2018)

Undergraduate Students:

Olivia McNamara (honors thesis, BS expected 2022)
Elizabeth Hamilton (BS expected 2023)
Allison Davis (BS 2021)
Caitlin Bugash (honors thesis, BS 2020)
William Green (BS 2020)
Faith Duffy (honors thesis BS 2019)
Adrianna Early (honors thesis, BS 2018)
Trent Guihan (BS 2018)

Graduate Committee Member:

Gercelino Ramos (MS exp. 2018)

PROFESSIONAL ACTIVITIES

2019-present Executive Committee, Cold Formed Steel Engineers Institute (CFSEI)

Responsible for strategic planning and leadership of a national-level professional organization dedicated to education, technology transfer, and research dissemination. As part of my role on the CFSEI Executive Committee, I chair the Education Committee, and am responsible for organizing a seminar series (6 seminars) throughout the year.

2019-2021 Member, ASCE 8 Stainless Steel Committee, American Society of Civil Engineers (ASCE)

Part of a 16 member group working to develop the next edition of the ASCE 8 standard.

2019-present Chair, Subcommittee 6: Test-Based Design, Committee on Specifications, American Iron and Steel Institute

Responsible for maintaining test-based specifications, strategic planning, creation of new testing standards, and shepherding experimental research towards design specification adoption.

- 2018, 2020 Reviewer, National Science Foundation
- 2017-present Member, Committee of Framing Standards (COFS), American Iron and Steel Institute
- Responsible for voting on and reviewing technical additions and changes to the COFS Standards, which govern cold-formed steel framing design in the US.
- 2015-2021 Chair, Structural Stability Research Council, Thin-Walled Structures Task Group
- Responsible for leadership and organization of Task Group; working towards creating and disseminating tools related to thin-walled structures; responsible for editing selected chapters of SSRC Guide. Created short course on cross-section stability (2018).
- 2009-present Member, Structural Stability Research Council
- 2015-present Affiliated Investigator, Cold-Formed Steel Research Consortium
- 2015-present Member (Educator), American Institute of Steel Construction
- 2018-present Member, American Society of Civil Engineers (student member 2005-2014, associate member 2014-2018))
- 2014-present ASCE/SEI Thermal Bridging Task Group
- 2013-present Member, Cold-Formed Steel Engineering Institute (CFSEI)
- 2009 Engineer in Training (EIT, Pennsylvania). Eligible to take PE in CA, MA

Reviewer for:

ASCE Journal of Structural Engineering
Thin-Walled Structures
Journal of Constructional Steel Research
Journal of Earthquake Engineering
Engineering Structures
Soil Dynamics and Earthquake Engineering

UNIVERSITY AND DEPARTMENTAL SERVICE

- 2019-present CEE Department Workload Committee
- 2019-2021 ADVANCE Equity and Collaboration Faculty Fellow

- 2019-2020 Lead, ADVANCE Mutual Mentoring Grant for the Women of Civil and Environmental Engineering
- 2018-2019 Lead, TEFD Mutual Mentoring Grant for the Women of Civil and Environmental Engineering
- 2018-present Member, History and Heritage Lectureship committee
- 2017-present New Student Orientation advisor (1 session 2017, 3 sessions 2018, 4 sessions 2019).
- 2016-present CEE Department Open House Committee (Chair beginning in 2018)
- 2018 CEE Department Search Committee Co-Chair (with Eleni Christofa), Professor of Practice
- 2018-present Faculty advisor, Earthquake Engineering Research Institute (EERI) seismic design team
- Spring 2017 Interim faculty advisor, American Society of Civil Engineers UMass Student Chapter
- Fall 2017 CEE Department Search Committee, Lab technician
- 2016-2017 Faculty advisor, Engineers for a Sustainable World
- 2016-present Undergraduate advising (including incoming freshmen during summer 2017)

COMMUNITY OUTREACH

- 2019-present Member and Clerk, Board of Directors, Pioneer Valley Symphony Orchestra

As Clerk, I am, part of the four-person Executive Board within the larger Board of Directors. As a Board member, I am responsible for ensuring the future of the Orchestra, through vision planning, creative fundraising, and general good governance of the group. In the 2019-2020 season, my goal is to work to make the PVSOC more accessible to families with young children,

- 2014-2016 Instructor, Center for STEM Research Young Scholars Program, UMass Amherst and Northeastern University

Developed and taught a day-long workshop in coordination with Andy Meyers (Assoc. Prof., Northeastern University) and the Massachusetts Wind Energy Center. Taught students about thin-walled tubular stability, conducted hands-on experiments on strengthening thin tubes under axial loads (Soda Can Lab), and introduced wind turbine design topics.

2013-2014 Mentor, STEM Achievement in Baltimore Elementary Schools (SABES), Johns Hopkins University

Participated in an after school STEM program for 5th grade students, responsible for guiding workshops and assisting students with projects once a week. Developed natural hazards-related learning modules for students to explore seismic loads on structures they designed. Culminated in designing and constructing a more resilient homeless shelter.

2013 Mentor, Women and Science and Engineering Program (WISE), Johns Hopkins University

Mentored and advised a high school student for a semester. The student spent approximately 6-8 hours a week at the university working on a final research project.

2009-2013 Volunteer, Maryland Wood Bridge Challenge

Maintained and re-designed test setup for testing balsa wood bridges made by area middle and high school students. Volunteered at competition.

2011 Volunteer, Expanding Your Horizons, Swarthmore College

Taught short courses on basic ideas in structural engineering to middle-school girls interested in STEM fields. Designed a concrete mix design with the participants, leading up to mixing concrete as part of the event.

PUBLICATIONS

Under Review *indicates student author

[24] Kalo, R.*, **Peterman, K.D.**, (2021) "Predicting Force-Displacement Behavior of Cold-Formed Steel Screw Fastened Connections" *Thin-Walled Structures* <submitted May 2021>

[23] Gusella, F., Orlando, M., **Peterman, K.D.**, (2021) "The impact of variability and combined loads on fuses in braced frames" *Journal of Constructional Steel Research* <submitted April 2021>

[22] Zhang, Z.*, Singh, A.*, Derveni, F.*, Torabian, S., **Peterman, K. D.**, Hutchinson, T. C., Schafer, B.W. (2021) "Cyclic Experiments on Steel Sheet Connections for CFS Framed Steel Sheet Sheathed Shear Walls with New Configurations" *Engineering Structures* <submitted Dec 2020>

[21] Zhang, Z.*, Singh, A.*, Derveni, F.*, Torabian, S., **Peterman, K. D.**, Hutchinson, T. C., Schafer, B.W. (2021) "Cyclic Experiments on Steel Sheet Connections for Standard CFS Framed Steel Sheet Sheathed Shear Walls" *Journal of Structural Engineering* <revisions requested May 17 2021>

[20] **Peterman, K.D.**, Webster, M.D., D'Aloisio, J.A., and Hajjar, J.F., (2021) "Creep Response of Fiber Reinforced Polymers in Flatwise Compression" *Journal of Composites for Construction* <submitted June 2020>

Published Journal Papers

*indicates student author

- [19] *Joorabchian, A., Li, Z., **Peterman, K.D.**, (2021). “Experimental and numerical investigation of fixed-height cold-formed steel wall assemblies bearing on concrete slabs” *Thin-Walled Structures* <accepted May 11, 2021>
- [18] **Peterman, K.D.**, Kordas, J., Webster, M.D., D’Aloisio, J.A., and Hajjar, J.F., (2021) “Structural Performance of Axially- and Laterally-Loaded Cantilevers with Thermally-Improved Detailing” *Journal of Constructional Steel Research* <<https://doi.org/10.1016/j.jcsr.2021.106617>>
- [17] *Kapoor, D. and **Peterman, K.D.** (2021) “Impact detailing on the thermal performance of cold formed steel wall assemblies.” *Structures* (<https://doi.org/10.1016/j.istruc.2020.12.060>)
- [16] Gusella, F., Orlando, M., **Peterman, K.D.**, (2020). “Influence of mechanical and geometric uncertainty on cold-formed steel bracing members equipped with additional holes” *Structures* (<https://doi.org/10.1016/j.istruc.2020.11.054>)
- [15] *Castaneda, H., **Peterman, K.D.** (2020). “Moment-rotation response of cold-formed steel joist-to-ledger connections with variable-finishes in ledger-framed construction” *Journal of Constructional Steel Research* (<https://doi.org/10.1016/j.jcsr.2020.106396>)
- [14] *Derveni, F., Gerasimidis, S., **Peterman, K.D.**, (2020). “Behavior of cold-formed steel shear walls sheathed with high-capacity sheathing” *Engineering Structures* (<https://doi.org/10.1016/j.engstruct.2020.111280>)
- [13] *Derveni, F., Gerasimidis, S., Schafer, B.W., **Peterman, K.D.**, (2020). “High-Fidelity Finite Element Modeling of Wood-Sheathed Cold-Formed Steel Shear Walls” *ASCE Journal of Structural Engineering* ([https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0002879](https://doi.org/10.1061/(ASCE)ST.1943-541X.0002879))
- [12] **Peterman, K.D.**, Webster, M.D., D’Aloisio, J.A., and Hajjar, J.F., (2020) “Structural Performance of Steel Shelf Angles with Thermally-Improved Detailing” *ASCE Journal of Structural Engineering* ([https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0002778](https://doi.org/10.1061/(ASCE)ST.1943-541X.0002778))
- [11] Civjan, S.A, *Guihan, T., **Peterman, K.D.** (2020) “Testing of Oxyacetalene Weld Strength” *Journal of Constructional Steel Research*, Volume 168 (<https://doi.org/10.1016/j.jcsr.2019.105921>)
- [10] *Gusella, F., Orlando, M., **Peterman, K.**, (2019) “On the required ductility in beams and connectors to allow a redistribution of moments” *Engineering Structures*, Volume 179, pp 595-610. (<https://doi.org/10.1016/j.engstruct.2018.11.009>)
- [9] *Gusella, F., Orlando, M., Arwade, S., **Peterman, K.**, (2018) “Influence of mechanical and geometric uncertainty on rack connection structural response” *Journal of Constructional Steel Research*, Volume 153, pp 343-355. (<https://doi.org/10.1016/j.jcsr.2018.10.021>)

[8] Leng, J., **Peterman, K.D.**, Bian, G., Buonopane, S., Schafer, B.W., (2017) “Modeling Seismic Response of a Full-Scale Cold-formed Steel-Framed Building.” *Engineering Structures* (<https://doi.org/10.1016/j.engstruct.2017.10.008>).

[7] B.W. Schafer, D. Ayhan, J. Leng, P. Liu, D. Padilla-Llano, **K.D. Peterman**, M. Stehman, S.G. Buonopane, M. Eatherton, R. Madsen, B. Manley, C.D. Moen, N. Nakata, C. Rogers, C. Yu, “Seismic Response and Engineering of Cold-formed Steel Framed Buildings,” *Structures*, Volume 8, Part 2, 2016, Pages 197-212, ISSN 2352-0124, (<https://doi.org/10.1016/j.istruc.2016.05.009>).

[6] **Peterman, K.D.**, Stehman, M., Madsen, R., Nakata, N., Buonopane, S., Schafer, B.W. (2016) “Sub-system level response of cold-formed steel buildings under seismic excitations.” *ASCE, Journal of Structural Engineering* (DOI: 10.1061/(ASCE)ST.1943-541X.0001578)

[5] **Peterman, K.D.**, Stehman, M., Madsen, R., Nakata, N., Buonopane, S., Schafer, B.W. (2016) “Fundamental system level response of cold-formed steel buildings under seismic excitations.” *ASCE, Journal of Structural Engineering* (DOI: 10.1061/(ASCE)ST.1943-541X.0001577)

{WINNER OF THE 2018 ASCE NORMAN MEDAL}

[4] Bian, G., **Peterman, K.D.**, Torabian, S., Schafer, B.W. (2014) “Direct torsion of cold-formed steel lipped channels”. *Journal of Constructional Steel Research* (DOI: <https://doi.org/10.1016/j.tws.2015.10.023>)

[3] **Peterman, K.D.**, Nakata, N., Schafer, B.W. (2014) “Hysteretic characterization of cold-formed steel stud-to-sheathing connections.” *Journal of Constructional Steel Research* (DOI: 10.1016/j.jcsr.2014.05.019).

[2] Liu, P., **Peterman, K.D.**, Yu, C., Schafer, B.W. (2013) “Impact of construction details on OSB sheathed cold-formed steel framed shear walls.” *Journal of Constructional Steel Research* (DOI: 10.1016/j.jcsr.2014.05.003).

[1] **Peterman, K.D.**, Schafer, B.W. (2013) “Sheathed Cold-Formed Steel Studs Under Axial and Lateral Load.” *ASCE, Journal of Structural Engineering* (DOI: 10.1061/(ASCE)ST.1943-541X.0000966).

Technical Reports

[5] *Kapoor, D., and **Peterman, K.D.**, “Thermal Analysis of Cold-Formed Steel Wall Assemblies,” Report to the American Iron and Steel Institute, Washington, D.C., April 2019, 53 pp.
<https://cfsei.memberclicks.net/assets/researchreport/RP18-1.pdf>

[4] *Joorabchian, A., Li, Z., **Peterman, K.D.**, “Steel Stud Assemblies Bearing on Concrete Slabs,” Report to the American Iron and Steel Institute, Washington, D.C., March 2019, 70 pp.

[3] **Peterman, K.D.**, Kordas, J., Moradei, J., Coleman, K., Der Ananian, J., Webster, M.D., D’Aloisio, J.A., and Hajjar, J.F., (2017) “Thermal Break Strategies for Cladding Systems in Building Structures,” Report to the Charles Pankow Foundation, Charles Pankow Foundation, Vancouver, WA, May 2017, 356 pp.

[2] **Peterman, K.D.**, B.W. Schafer (2013). "Hysteretic shear response of fasteners connecting sheathing to cold-formed steel studs" Research Report, CFS-NEES, RR04, January 2013, 38 pp. access at www.ce.jhu.edu/cfsnees

[1] Liu, P. **Peterman, K.D.**, Schafer, B.W. (2012). "Test Report on Cold-Formed Steel Shear Walls" Research Report, CFS-NEES, RR03, June 2012, 151 pp. access at www.ce.jhu.edu/cfsnees

Conference Papers

[33] *Joorabchian, A., Li, Z., **Peterman, K.D.**, "Numerical investigation of the impact of bearing conditions on the stability of full-height cold-formed steel wall assemblies under compression" Structural stability research council annual stability conference (SSRC), Louisville, Kentucky, 2021 <Abstract accepted>.

[32] Gusella, F., Orlando, M., **Peterman, K.D.** (2020) "The effect of mechanical and geometric uncertainty on perforated CFS bracing members." Cold-Formed Steel Research Consortium Colloquium (CFSRC) Conference, Oct 20-21, 2020.

[31] *Derveni F., Gerasimidis S., **Peterman, K.D.**, (2020), Impact of fastener spacing on the behavior of cold-formed steel shear walls sheathed with fiber cement board, Cold-Formed Steel Research Consortium Colloquium (CFSRC) Conference, Oct 20-21, 2020.

[30] *Joorabchian, A., Li, Z., **Peterman, K.D.** (2020), "Experimental and numerical investigation of the impact of bearing condition on the behavior of cold-formed steel stud wall assemblies", Cold-Formed Steel Research Consortium Colloquium (CFSRC) Conference, Oct 20-21, 2020.

[29] *Castaneda, H., and **Peterman, K.D.** (2020). "Characterizing Wall-to-Diaphragm Moment-Rotation Response in Cold-Formed Steel Systems via Fastener Limit States." Proceedings of the Cold-Formed Steel Research Consortium Colloquium, October 20-21, 2020.

[28] *Kapoor, D., **Peterman, K.D.**, (2020), "Impact of gravity detailing on the thermal performance of cold-formed steel wall assemblies," Proceedings of the Cold-Formed Steel Research Consortium Colloquium, October 20-21, 2020.

[27] *Derveni, F., Gerasimidis, S., **Peterman, K.D.** (2020), "Nonlinear Fastener-Based Modeling of Cold-Formed Steel Shear Walls." In the proceedings of *Structures Congress 2020*. Reston, VA. April. (conference cancelled due to pandemic)

[26] *Castaneda, H., and **Peterman, K.D.** (2020). "Moment-Rotation Characterization of Cold-Formed Steel Joist-to-Ledger Connections with Variable Sheathing.", Proceedings of the Annual Stability Conference Structural Stability Research Council, Atlanta, Georgia, April 21-24. (conference cancelled due to pandemic)

- [25] *Singh, A., Wang, X., Torabian, S., Hutchinson, T. C., **Peterman, K. D.**, & Schafer, B. W. (2020). Seismic Performance of Symmetric Unfinished CFS In-Line Wall Systems. In the proceeding of *Structures Congress 2020*. Reston, VA. April. (conference cancelled due to pandemic)
- [24] *Zhang, Z. , *Derveni, F., *Singh, A., Wang, X., Castaneda, H., Torabian, S., **Peterman, K.D.**, Hutchinson, T.C., Schafer, B.W. (2020). “Simulation of Cold-formed Steel Framed Shear Walls for Buildings: Efforts within CFS- NHERI.” 2020 National Earthquake Conference (conference cancelled due to pandemic), http://earthquakeconference.org/pdf/NEC_Program.pdf
- [23] *Derveni, F., Gerasimidis, S., **Peterman, K.D.**, “Capturing Cold-Formed Steel Shear Wall Behavior Through Nonlinear Fastener-Based Modeling.” Proceedings of the Structural Stability Research Council Annual Conference, St. Louis, MO, 2019
- [22] *Joorabchian, A., Li, Z., **Peterman, K.D.** “The impact of bearing conditions on the stability behavior or cold-formed steel stud assemblies.” Proceedings of the Structural Stability Research Council Annual Conference, St. Louis, MO, 2019
- [21] T. Kijewski-Correa, J. Gong, A. Kennedy, J. A. Womble, C.S. Cai, J. Cleary, T. N. Dao, F. Leite, D. Liang, **K. Peterman**, C. Sun, A. Taflanidis and R. L. Wood, “Performance of Low Rise Construction under Wind and Coastal Hazards during the Landfall of Hurricane Harvey” paper accepted to the ASCE Forensics Engineering 8th Congress, Nov. 2018.
- [20] *Early, A., Wood, R., **Peterman, K.D.**, “Behavior of cold-formed steel metal industrial buildings.” Paper accepted to International Center for Cold-Formed Steel Specialty Conference, St Louis, MO presented Nov. 2018.
- [19] *Joorabchian, A., **Peterman, K.D.**, “The impact of bearing conditions on the behavior of cold-formed steel stud assemblies” Proceedings of the International Center for Cold-Formed Steel Specialty Conference, November 2018.
- [18] *Castaneda, H., Ayhan, D., Schafer, B.W., **Peterman, K.D.**, “Computational modeling of joist-to-ledger connections in cold-formed steel diaphragms”. Proceedings of the International Center for Cold-Formed Steel Specialty Conference, November 2018.
- [17] *Joorabchian, A., **Peterman, K.D.**, “Using photogrammetry-based imperfection measurement tools to determine the impact of corner radii imperfections on cold-formed steel member strength” Proceedings of the Structural Stability Research Council Annual Conference, Baltimore, MD, 2018
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Presentations and Seminars

[10] **Peterman, K.D.**, Seminar given to University of Kansas Civil Engineering Department (9 October 2019)

[9] **Peterman, K.D.**, Seminar given at the Cold Formed Steel Research Consortium US-Sino Colloquium, Shanghai, China, August 23-25, 2019.

[8] **Peterman, K.D.**, Seminar given to the Metal Building Manufacturers Association, Cleveland OH, July 31, 2019

[7] **Peterman, K.D.**, Presentation given to the Cold-Formed Steel Engineering Institute, Chicago, IL, June 5, 2019.

[6] Hajjar, J.F., **Peterman, K.D.**, Webster, M., D’Aloisio, J.A., “Thermal Steel Bridging Quantification and Solutions in Steel-Framed Structures.” Presentation at the National Association of Steel Construction Conference, St. Louis, MO, 2019.

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[3] **Peterman, K.D.**, Webster, M.D., D’Aloisio, J.A, Hajjar, J.F., “The Enlightened Structure: Reducing Material-Based Carbon Emissions.” Building Energy 2016, Northeast Sustainable Energy Association, Boston MA, 2016.

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MUSICAL POSITIONS HELD

I have been an avid classical clarinetist since I picked up the instrument at age 10. In the ensuing decades, it has been my constant companion, and I have made community music a priority in my personal life. To love music is to share it, and it has been one of the great joys of my life to be able to do so. Indeed, I have been a clarinetist for longer than I have been an engineer, so it would be remiss to exclude it from this curriculum vitae.

2017-present	Principal Clarinet, the Pioneer Valley Symphony Orchestra
2016-present	Clarinetist, The Valley Winds
2014-2016	Principal Clarinet, Northeastern University Wind Ensemble
2014-2016	Principal Clarinet, Northeastern University Symphony Orchestra
2009-2014	Principal Clarinet, Hopkins Symphony Orchestra