

Jack W. Baker

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Stanford University
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Stanford, California 94305-4020

CV Date: 6/2/2025

PROFESSIONAL APPOINTMENTS

2025 – present	William Alden Campbell and Martha Campbell Professor of Civil & Environmental Engineering, Stanford University
2022 - present	Associate Dean for Faculty Affairs, Stanford Doerr School of Sustainability, Stanford University
2019 - 2024	Professor of Civil & Environmental Engineering, Stanford University
2013 - 2019	Associate Professor of Civil & Environmental Eng., Stanford University
2006 - 2013	Assistant Professor of Civil & Environmental Eng., Stanford University
2005 - 2006	Visiting Researcher, Swiss Federal Institute of Technology, Zurich
2004	Visiting Researcher, Nagoya University

EDUCATION

Ph.D., Structural Engineering, Stanford University, 2005
M.A., Statistics, Stanford University, 2004
M.S., Structural Engineering, Stanford University, 2002
B.A., Mathematics/Physics, Magna Cum Laude, Whitman College, 2000

HONORS AND AWARDS

- VI José María Sarriegi Scientific Divulcation Award from the Aon Spain Foundation Catastrophe Observatory and Tecnun School of Engineering of the University of Navarra, 2024.
- Engineer/Innovator profile by the Structural Engineers Association of Northern California Hensolt SEAONC Legacy Project, legacy.seaonc.org/engineer/jack-baker, 2024.
- Stanford Leadership Academy, 2023-24
- William B. Joyner Lecture Award, awarded jointly from the Seismological Society of America and the Earthquake Engineering Research Institute, 2023
- Thorpe Medal, from the European Council on Computing in Construction, 2022
- PROSE Award Earth Science Finalist for the textbook Seismic Hazard and Risk Analysis, 2022
- Helmut Krawinkler Award from the Structural Engineers Association of Northern California (SEAONC) for outstanding leadership in implementing state-of-the-art research into practice, 2019
- Walter L. Huber Civil Engineering Research Prize from the American Society of Civil Engineers for research to characterize the damaging effects of earthquake ground motion for seismic hazard

analysis and performance-based engineering of buildings, bridges, and geographically distributed infrastructure. 2018

- Erskine Fellow, University of Canterbury, 2015
- Excellence in Structural Engineering Research Award from the Structural Engineers Association of California (SEAOC). Awarded to the NGA-West project for outstanding achievement in developing ground motion models and databases that have major impacts on structural engineering practice and research. 2015
- Lee Otterson Faculty Scholar, Stanford University, 2013
- Eugene L. Grant Award in recognition of dedication and excellence in teaching as voted by the students of the Department of Civil & Environmental Engineering at Stanford University, 2013
- Early Achievement Research Award from the International Association for Structural Safety and Reliability (IASSAR), 2013
- Outstanding Paper, Earthquake Spectra, 2011
- CAREER Award, National Science Foundation, 2010
- Shah Family Innovation Prize, from the Earthquake Engineering Research Institute, for creativity, innovation and an entrepreneurial spirit in earthquake risk mitigation, 2010

ADVISING AND COLLABORATION

Current Ph.D. Students

1. Tinger Zhu, 2026 anticipated graduation
2. Gabriela Calana, 2027 anticipated graduation
3. Bofan Yu, 2028 anticipated graduation
4. Jordaina Hewitt, 2029 anticipated graduation

Former Ph.D Students

5. Emily Mongold, 2025
6. Omar Issa, 2024
7. Corinne Bowers, 2023
8. Rodrigo Silva Lopez, 2022
9. Gitanjali Bhattacharjee, 2021
10. Yilin Chen, 2021
11. Sabine Loos, 2021
12. Ganyu Teng, 2021
13. Anne Hulsey, 2020
14. Gemma Cremen, 2019
15. Maryia Markhvida, 2019
16. Abhineet Gupta, 2017

17. Jason Wu, 2017
18. Reagan Chandramohan, 2016
19. Beliz Ugurhan Gokkaya, 2015
20. Christophe Loth, 2014
21. Mahalia Miller, 2014
22. Lynne Burks, 2014
23. Andrew Seifried, 2013
24. Shrey Shahi, 2013
25. Ting Lin, 2012
26. Victor Victorsson, 2011
27. Yoshifumi Yamamoto, 2011
28. Nirmal Jayaram, 2010

Postdoctoral Students

Simona Meiler (2024-present)
Nikola Blagojevic (2024-present)
Neetesh Sharma (2022-2024), Now at Florida State University/Florida A&M University
Rodrigo Costa (2020-2022), Now at University of Waterloo
Neal Simon Kwong (2019-2021), Now at U.S. Geological Survey
Katy Serafin (2017-2019), Now at University of Florida
Camilo Gomez (2014-2015), Now at University de Los Andes
Hyeuk Ryu (2007-2010), Now at Geoscience Australia

Masters Students Supervised (with publications)

Jeonghyun (Peter) Lee (2023-2024)
Joshua Dimasaka (2021-2022)
Jimmy Zhang (2021-2022)
Chenbo Wang (2020-2021)
Tamika Bassman (2019-2021)
Karen Barns (2017-2018)
Cynthia Lee (2015-2016)
Jen Foschaar (2011-2012)

SYNERGISTIC ACTIVITIES

- Member of the Technical Advisory Committee for the San Francisco Municipal Transportation Agency waterfront resilience program, 2025-present
- Member of the NHERI DesignSafe Advisory Board, 2023-present.
- Member of the Building Seismic Safety Committee (BSSC) Provisions Update Committee (PUC) to select design hazard levels for functional recovery performance objectives of new buildings, 2022-2025.

- Steering Committee member for the U.S. Geological Survey National Seismic Hazard Model Program, 2020-present.
- Member of the Natural Hazards Engineering Research Infrastructure Computational Modeling and Simulation Center (NHERI SimCenter) Socio-Economic Impacts Working Group and Regional Risk Working Group, 2021-present.
- Domain Expert and Faculty Advisor for the Natural Hazards Engineering Research Infrastructure Computational Modeling and Simulation Center (NHERI SimCenter), 2018-present.
- Director, Stanford Urban Resilience Initiative, 2016-present.
- Member of the International Scientific Advisory Panel for QuakeCoRE Center for Earthquake Engineering Resilience, 2017-present.
- Member of the Board of Directors, and Treasurer, for the Civil Engineering Risk and Reliability Association (CERRA), 2015-present.
- Co-director of the Stanford Center for Induced and Triggered Seismicity, 2013-present.
- Instructor, Stanford Center for Professional Development course on Enterprise Risk Management, 2022
- Member of SOMPO Energy Resilience Study Group, 2020-2022.
- Research Committee member, Pacific Earthquake Engineering Research Center, 2017-2019.
- Member of the Building Seismic Safety Council (BSSC) 2020 National Earthquake Hazard Reduction Program (NEHRP) Provisions Update Committee. Member of Issue Team 1—Seismic Performance Objectives, 2016-2018.
- Member of SCEC Committee on Utilization of Ground Motion Simulations (UGMS), organized to develop long-period response spectral acceleration maps for Los Angeles region for inclusion in NEHRP and ASCE 7 Seismic Provisions and in Los Angeles City Building Code, 2013-2021.
- Member of the Technical Committee on Life-Cycle Performance, Cost and Optimization, within the International Association for Structural Safety and Reliability, 2013-2016.
- Member of the Building Seismic Safety Council Issue Team 4, Evaluation of the Current Response History Analysis Procedures (ASCE 7 Chapter 16), 2011-2014.
- Member of the Southern California Earthquake Center’s Planning Committee, as chair of the Earthquake Engineering Implementation Interface focus group, 2011-2018.
- Global Ground Motion Prediction Equations (GMPE) Program team member for the Global Earthquake Model (GEM) initiative—chair of task group for inclusion of near-fault effects, 2010-2012.
- Member of the ASCE Task Group on Risk Assessment of Structural Infrastructure Facilities and Risk-Based Decision Making (part of the Technical Council on Life-Cycle Performance, Safety, Reliability and Risk of Structural Systems), 2009-2015.
- Host of the JCSS Second Workshop on Structural Robustness, Stanford University, October 26-27, 2008.
- Member of the Executive Committee for the Extreme Ground Motions Project (a Department of Energy research program to identify limits on ground motions to constrain seismic risk at the Yucca Mountain Nuclear Waste Repository), 2008-2010.

- Host and Chair of the Special Workshop on Risk Acceptance and Risk Communication, Stanford University, March 26-27, 2007. www.ripid.ethz.ch.
- Validation team member for Applied Technology Council project ATC-58, "Next-Generation Performance-Based Seismic Design Guidelines for New and Existing Buildings."
- Technical Advisory Committee member for the Pacific Earthquake Engineering Research (PEER) center's Ground Motion Selection and Modification Program, 2006-2012.
- Project team member, Design Ground Motion Library (DGML), 2006-2007.

PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers (ASCE)
- Consortium of Universities for Research in Earthquake Engineering (CUREE)
 - o Member of Board of Directors, 2011-2012.
 - o Member of Executive Committee, 2012
- Earthquake Engineering Research Institute (EERI)
 - o Editor in Chief, Earthquake Spectra, 2023-present
 - o Editor, Earthquake Spectra, 2018-2022
 - o Associate Editor, Earthquake Spectra, 2013-2018
 - o Shah Family Innovation Prize Selection Committee, 2015-2021
- Joint Committee on Structural Safety (JCSS)
- Civil Engineering Risk and Reliability Association
 - o Member of Board of Directors, 2015-present
 - o Treasurer, 2015-present
- Pacific Earthquake Engineering Research (PEER) Center
 - o Member of Research Committee, 2017-2019
- Seismological Society of America (SSA)
 - o Associate Editor, Bulletin of the Seismological Society of America, 2008-2013.
- Southern California Earthquake Center (SCEC)
 - o Member of Planning Committee, 2011-2019
- North American Alliance of Hazards and Disaster Research Institutes

UNIVERSITY AND DEPARTMENTAL SERVICE

- Member, University Task Force on Undergraduate Expansion, 2025
- Associate Dean for Faculty Affairs, Stanford Doerr School of Sustainability, 2022-present
- Chair of Civil and Environmental Engineering Department teaching load ad hoc committee, 2024-2025.
- Search committee member for the inaugural Director of the Stanford Sustainable Societies Institute, 2024
- Evaluation committee member for faculty candidate, CEE department, 2024

- Member of Faculty Senate, 2023-present
- Faculty Co-director of the Stanford Doerr School of Sustainability faculty mentoring program, 2023-present
- Faculty Advisor for the Doerr School & Naval Postgraduate School Climate Security Fellows program, 2023-present
- Member of graduate curriculum committee, CEE, 2022-present
- Coordinator of CEE 298 seminar series, 2012-present
- Member of Civil and Environmental Engineering PhD admissions committee, 2023-2024
- Member of Civil and Environmental Engineering ad hoc committee to devise a CEE PhD cohort experience, 2023
- Member of the HAI AI + Sustainability working group, 2023
- VPDoR Limited Submissions Faculty Review Committee, 2022-2023
- Structural Engineering and Geomechanics Program Coordinator, 2016-2022
- Member of Stanford WorkLife Office's Dependent Care Working Group, 2022-2023
- Tenure committee member, Haeyoung Noh, 2021-2022
- Search committee member for the inaugural Dean of the Stanford Doerr School of Sustainability, 2021-2022
- Fill-in search committee member, CEE department faculty search, 2022
- Chair of promotion committee for Mike Lepech, 2020-2021
- Faculty mentor for Prof. Haeyoung Noh, 2020-present
- Member of the Board of Trustees Committee on Land and Buildings, 2018-2020.
- Reappointment committee member, Catherine Gorle, 2019-2020
- Member of CEE Website committee, 2018-2020
- Member of the Child Care Working Group (CCWG), under the Affordability Task Force (ATF) of the Stanford Long-Range Planning process, 2018-2021
- Appointment committee member for Haeyoung Noh's appointment to Associate Professor (Untenured), 2018-2019
- Board of Directors, Children's Center of the Stanford Community, 2017- 2019
 - o President of the Board, 2017-2018
 - o Secretary and member of the Executive Committee, 2018-2019
- Promotion committee member for Christian Linder, 2017-2018
- Pre-Major Advisor, 2016-2019
- Member of CEE Undergraduate Curriculum Committee, 2012-2014
- Member of Civil & Environmental Engineering department faculty search committee, 2009-2010.
- Co-host of Stanford Center for Teaching and Learning's Science and Engineering Teaching Lunch series, 2009-2010.
- Subject matter expert regarding seismic risk to the Stanford campus, including meetings with the Chief Financial Officer, Office of Emergency Management, and Stanford's seismic risk consultants, 2008-present.

- Faculty advisor for the Stanford Chapter of the American Society of Civil Engineers (ASCE), 2007-2010.
- Coordinator of Structural Engineering and Geomechanics group PhD admissions, 2007-2009.

ACADEMIC SERVICE

- Editor in Chief, Earthquake Spectra, 2022-present
- Editor, Earthquake Spectra, 2018-2022
- Associate Editor for:
 - Earthquake Engineering and Structural Dynamics, 2016-present
 - o Structural Safety, 2017- present
 - Earthquake Spectra, 2013-2018
 - Bulletin of the Seismological Society of America, 2008-2013.
 - Earthquakes and Structures, 2010-2013.
- Volunteer advisor of first-generation college students, via ScholarMatch, 2022-2023
- Speaker and workshop host to train students and young professionals in writing and professional skills
 - o "Thoughts on Writing," Oregon State University Civil and Construction Engineering's Write Club, March 2020.
 - o "Technical Writing Skills," Earthquake Engineering Research Institute Younger Members Forum, December 2020.
 - o "Getting Published, with a focus on Earthquake Spectra," Earthquake Engineering Research Institute, February 2021.
 - o "Transitioning from Graduate Studies to Securing Faculty Positions," Canadian Society for Civil Engineering, May 2021.
 - o "Designing and Delivering an Effective Lecture," Stanford University Civil and Environmental Engineering graduate student pedagogy training, October 2021.
 - o "Effective Writing Workshop," Earthquake Engineering Research Institute Younger Members Forum, July 2022.
 - o "Getting Published in Earthquake Spectra," Earthquake Engineering Research Institute, October 2022.
 - o "Effective Technical Presentations and Visual Communication Workshop," Earthquake Engineering Research Institute Younger Members Forum, April 2023.
 - o "Academic Publishing Workshop," NHERI Graduate Student Council, June 2023.
 - o "Research overview and academic advice," Stanford summer undergraduate intern programs (SUPER, MUIR, CEE), July 2023
 - o "Working with your advisor," Stanford CEE 379, Intro to the PhD, October 2023.
 - o "What I like and don't like about being a professor," Stanford Doerr School of Sustainability Pro Seminar, October 2023.
 - o "Reflections on my career path," QuakeCoRE Young Investigators Program, December 2023.

- Research Committee Member, Pacific Earthquake Engineering Research Center, 2017-2019
- Proposal reviewer for Austrian Science Fund, EERI/FEMA NEHRP Graduate Research Fellowship, Israeli Ministry of Science, Technology and Space, Louisiana Board of Regents' University Seed Funding Proposals, Mitacs Accelerate program, Canada, National Science Foundation, New Zealand Earthquake Commission, Pacific Earthquake Engineering Research (PEER) Center Transportation Systems Research Program, Research Grant Council (RGC) of Hong Kong, Royal Society Newton International Fellowships, Southern California Earthquake Center
- Paper reviewer for Acta Geotechnica, AGU Advances, ASCE Journal of Geotechnical and Geoenvironmental Engineering, ASCE Journal of Structural Engineering, ASCE Practice Periodical on Structural Design and Construction (recognized as 2019 Outstanding Reviewer), ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, Bulletin of Earthquake Engineering, Bulletin of the New Zealand Society for Earthquake Engineering, Bulletin of the Seismological Society of America, Canadian Geotechnical Journal, Civil Engineering and Environmental Systems, Computer-Aided Civil and Infrastructure Engineering, Computers & Geosciences, Earthquake Engineering and Structural Dynamics, Earthquake Engineering and Engineering Vibration, Earthquake Spectra, Geophysical Journal International, Geophysical Research Letters, Georisk, International Journal of Disaster Risk Reduction, Journal of Bridge Engineering, Journal of Geophysical Research - Solid Earth, Journal of Earthquake Engineering, Journal of Engineering Mechanics, Journal of Infrastructure Systems, Journal of Performance of Constructed Facilities, Journal of Seismology, Journal of Southwest Jiaotong University, Materials and Structures, Natural Hazards Review, Nature Communications, Nonlinear Dynamics, npj Urban Sustainability, Nuclear Engineering and Design, Probabilistic Engineering Mechanics, Risk Analysis, Scientific Reports, Seismological Research Letters, Soil Dynamics and Earthquake Engineering, Structural Engineering and Mechanics, Structural Engineering International, Structural Safety, Sustainable and Resilient Infrastructure, Terrestrial Atmospheric and Oceanic Sciences Journal
- Conference committee member for:
 - o 14th International Conference on Structural Safety and Reliability (ICOSSAR'25), Los Angeles, 2025.
 - o Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2025), Rhodes Island, Greece, 2025.
 - o World Conference on Earthquake Engineering, Milan, 2024
 - o Advancing Sustainable Urban Infrastructure Workshop, Stanford Graduate School of Business and Doerr School of Sustainability, 2023
 - o Earthquake Engineering Research Institute Annual Meeting, San Francisco, 2023
 - o 14th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP14), 2023
 - o ASCE Lifelines Conference (Lifelines2021) San Fernando Earthquake Conference – 50 years of Lifeline Engineering
 - o 13th International Conference on Structural Safety and Reliability (ICOSSAR2021), Shanghai
 - o 7th Asia-Pacific Symposium on Structural Reliability and Its Applications (APSSRA2020) Tokyo, 2020

- 13th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP13), Seoul, 2019
- 11th National Conference on Earthquake Engineering, Los Angeles, 2018
- 16th World Conference on Earthquake Engineering, Santiago, 2017
- 10th Pacific Conference on Earthquake Engineering, Sydney, 2015
- Engineering Mechanics Institute Conference, 2015
- 10th National Conference on Earthquake Engineering, Anchorage, 2014
- 4th IASPEI/IAEE International Symposium on the Effects of Surface Geology on Seismic Motion, Santa Barbara, 2011
- First World Congress on Advances in Structural Engineering and Mechanics (ASEM'11), Seoul, 2011
- 3rd International Symposium on Geotechnical Safety and Risk (ISGSR-2011), Munich, 2011
- 10th International Conference on Structural Safety and Reliability (ICOSSAR2009), Osaka, 2009
- Special Workshop and Risk Acceptance and Risk Communication, Stanford, 2007

TEACHING

Teaching scores are out of 5.0, with mean scores in the university near 4.0.

<i>Course #</i>	<i>Title</i>	<i>Term</i>	<i>Enroll.</i>	<i>Amt. Lrn.</i>	<i>Inst. Qual.</i>
CEE 203	Probabilistic Models for CEE	Aut 2006	32		
CEE 101A	Mechanics of Materials	Win 2007	25		
CEE 203	Probabilistic Models for CEE	Aut 2007	29		
CEE 101A	Mechanics of Materials	Win 2008	34		
CEE 204	Structural Reliability	Spr 2008	19		
CEE 203	Probabilistic Models for CEE	Aut 2008	40		
CEE 101A	Mechanics of Materials	Win 2009	41		
CEE 289	Random Vibrations	Spr 2009	10		
CEE 203	Probabilistic Models for CEE	Aut 2009	68		
CEE 101A	Mechanics of Materials	Win 2010	42		
CEE 204	Structural Reliability	Spr 2010	34		
CEE 203	Probabilistic Models for CEE	Aut 2010	53		
CEE 101A	Mechanics of Materials	Win 2011	35		
CEE 289	Random Vibrations	Spr 2011	14		
CEE 101A	Mechanics of Materials	Win 2012	39		
CEE 204	Structural Reliability	Spr 2012	39		
CEE 203	Probabilistic Models for CEE	Aut 2012	46		
CEE 101A	Mechanics of Materials	Win 2013	39		
CEE 298	SEG Seminar	Win 2013	66		
CEE 289	Random Vibrations	Spr 2013	15		
CEE 203	Probabilistic Models for CEE	Aut 2013	51		
CEE 29N	Managing Natural Disaster Risk	Win 2014	7		
CEE 298	SEG Seminar	Win 2014	65		

CEE 203	Probabilistic Models for CEE	Aut 2014	50		
CEE 29N	Managing Natural Disaster Risk	Win 2015	6		
CEE 298	SEG Seminar	Win 2015	67		
CEE 204	Structural Reliability	Spr 2015	20		
ENEQ601	Risk Management (U of Canterbury)	Fall 2015	28		
ENEQ610	Engineering Seismology (U of Cant.)	Fall 2015	37		
CEE 203	Probabilistic Models for CEE	Aut 2016	44		
CEE 29N	Managing Natural Disaster Risk	Win 2017	6		
CEE 204	Structural Reliability	Spr 2017	25		
CEE 203	Probabilistic Models for CEE	Aut 2017	59		
CEE 181	Design of Steel Structures	Aut 2017	11		
CEE 298	SEG Seminar	Win 2018	79	3.9	4.3
CEE 289	Random Vibrations	Spr 2018	19	4.6	4.7
CEE 203	Probabilistic Models for CEE	Aut 2018	44	4.3	4.8
CEE 181	Design of Steel Structures	Aut 2018	8	4.8	4.8
CEE 204	Structural Reliability	Win 2019	18	4.6	4.6
CEE 298	SEG Seminar	Win 2019	44	4.0	4.2
CEE 203	Probabilistic Models for CEE	Aut 2019	44	4.5	4.8
CEE 181	Design of Steel Structures	Aut 2019	12	4.4	4.7
CEE 289	Random Vibrations	Win 2020	11	-	-
CEE 298	SEG Seminar	Win 2020	50	-	-
CEE 203	Probabilistic Models for CEE	Aut 2020	38	4.5	4.7
CEE 204	Structural Reliability	Win 2021	13	4.6	4.8
CEE 298	SEG Seminar	Win 2021	47	4.2	4.7
CEE 203	Probabilistic Models for CEE	Aut 2021	65	4.4	4.7
CEE 289	Random Vibrations	Win 2022	11	4.8	4.9
CEE 298	SEG Seminar	Win 2022	50	4.2	4.2
CEE 296	Regional Seismic Risk Analysis	Spr 2022	12	4.2	4.3
CEE 203	Probabilistic Models for CEE	Aut 2022	79	4.5	4.6
CEE 209S	Disaster Resilience Seminar	Aut 2022	21	3.7	4.1
CEE 288	Seismic Hazard and Risk	Win 2023	36	4.8	4.7
CEE 298	SEG Seminar	Win 2023	58	4.0	4.4
CEE 203	Probabilistic Models for CEE	Aut 2023	61	4.5	4.7
CEE 288	Seismic Hazard and Risk	Win 2024	32	4.8	4.9
CEE 298	SEG Seminar	Win 2024	46	4.3	4.5
CEE 203	Probabilistic Models for CEE	Aut 2024	51	4.5	4.8
CEE 288	Seismic Hazard and Risk	Win 2025	36	4.6	4.9
CEE 298	SEG Seminar	Win 2025	66	4.4	4.6

PLENARY AND KEYNOTE LECTURES

University of Illinois at Urbana-Champaign and Zhejiang University CIRCLE Distinguished Lecture, December 2024.

“Engineering models to support regional disaster resilience assessment,” *The 4th International Forum of NFEES on the Latest Development of Resilient City*. Tianjin, China. December 2023.

“Engineering models to support regional disaster resilience assessment,” *Te Hiranga Rū QuakeCoRE Annual Meeting Distinguished Lecture*, Napier, New Zealand, August 2023.

“Recent advances in ground motion selection for seismic analysis,” *9th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering Plenary Lecture*, Athens, Greece, June 2023.

“Spatial correlation in ground motion intensities: Measurement, prediction, and seismic risk implications,” *Seismological Society of America Annual Meeting Joyner Lecture*, San Juan, Puerto Rico, April 2023.

“Spatial correlation in ground motion intensities: Measurement, prediction, and seismic risk implications,” *Earthquake Engineering Research Institute Annual Meeting Joyner Lecture*, San Francisco, April 2023.

“Performance-based engineering for simulation of regional post-earthquake recovery and resilience,” *International Conference on Materials, Mechanics and Structures 2022 (ICMMS 2022)*.

“Engineering disaster-resilient systems in an uncertain future,” *University of Michigan’s Building the Future Distinguished Lecture Series*, April 2021.

“Advances in simulating post-earthquake recovery for performance-based engineering and resilience,” *Plenary lecture at the Pacific Earthquake Engineering Research Center Annual Meeting*, Berkeley, January 2020.

“Advances in simulating post-earthquake recovery for performance-based engineering and resilience,” *Keynote lecture at the Society for Earthquake and Civil Engineering Dynamics 2019 Conference*, London, September 2019.

“Performance-based earthquake engineering for transportation networks,” *Theme Session lecture at the 10th National Conference on Earthquake Engineering*, Los Angeles, June 2018.

“Incorporating induced seismicity source models and ground motion predictions to forecast dynamic regional risk,” *Keynote lecture at Geotechnical Earthquake Engineering and Soil Dynamics V*, Austin, June 2018.

“Quantifying Seismic Risk to Transportation Networks: User Impacts and At-Risk Communities,” *Plenary lecture at the 2018 PEER Annual Meeting*, Berkeley, January 2018.

“Unlocking value in earthquake resilience,” *Plenary lecture at the Strengthening our Cities SEAOSC Summit*, Los Angeles, November 2017.

“Characterization of spatial correlations in ground motions—insights from physics-based simulations,” *Keynote lecture at the Southern California Earthquake Center Annual Meeting*. Palm Springs, California. August 2017.

“Quantifying seismic risk to transportation networks: user impacts and at-risk communities,” *New Zealand Society for Earthquake Engineering Traveling Lectureship*, talks given in Auckland, Wellington and Christchurch, New Zealand, 2015-2016.

- “Ground motion selection for performance-based engineering, and the Conditional Mean Spectrum as a selection tool,” *Plenary lecture at 10th Pacific Conference on Earthquake Engineering*, Sydney, Australia, October 2015.
- “Quantifying seismic risk to transportation networks: user impacts and at-risk communities,” IBK Kolloquium lecture at the Swiss Federal Institute of Technology, Zurich. March 2015.
- “Recent progress in seismic hazard analysis and ground motion selection,” *Plenary lecture at 2011 Pacific Earthquake Engineering Research Center*, Berkeley, California, October 2011.
- “Effects of earthquake source geometry and site conditions on spatial correlation of earthquake ground motion hazard.” *Keynote lecture at 4th IASPEI/IAEE International Symposium on Effects of Surface Geology on Seismic Motion*, Santa Barbara, California, August 2011.
- “An overview of the Conditional Mean Spectrum,” *Keynote lecture at the 2010 COSMOS Technical Session*. San Francisco, California. October 2010.
- “Active Region Time History Selection/Generation Approaches.” *Keynote lecture at the Association of Environmental & Engineering Geologists Shlemon Specialty Conference*. Memphis, Tennessee. June 2009.
- “Engineering use of ground motions: Challenges and opportunities.” *Keynote lecture at the Southern California Earthquake Center Annual Meeting*. Palm Springs, California. August 2008.

INVITED ACADEMIC SEMINARS

- University of California, San Diego, February 2023
- University of Nevada, Reno, April 2022
- Texas A&M University, October 2021
- University of Southern California, March 2021
- Pennsylvania State University, November 2020
- University of California, Los Angeles, February 2020
- Oregon State University, March 2020
- Johns Hopkins University, April 2019
- University of California, Davis, January 2019
- Case Western Reserve University, November 2017
- University of Illinois, Urbana-Champaign, December 2017
- University of California San Diego, June 2015
- University of California Los Angeles, May 2014
- California Institute of Technology, April 2013
- University at Buffalo, December 2011
- University of Washington, August 2010
- Northwestern University, May 2010
- University of California, Berkeley, April 2010

- University of Colorado, Boulder, February 2010
- Georgia Institute of Technology, November 2009
- University of Southern California, October 2009
- University of California, Berkeley, April 2008
- California Institute of Technology, October 2007
- Stanford University Department of Geophysics, June 2007
- Swiss Federal Institute of Technology, Zurich, November 2005
- University of Illinois at Urbana-Champaign, March 2005
- University of Minnesota, March 2005
- University of Michigan, November 2004

OTHER INVITED LECTURES AND SEMINARS

- COSMOS Technical Session and Annual Meeting, November 2024
- U.S. Geological Survey, October 2024
- Japan-US Research Collaboration Week, July 2024
- 18th World Conference on Earthquake Engineering, two invited talks, July 2024
- Stanford Doerr School of Sustainability Faculty Forum, November 2023
- Sandia National Laboratories Bay Area Strategic Engagement Seminars (BASES), May 2023
- National Seismic Hazard Mapping Project workshop on Seismic Directivity, October 2021
- Canadian Society of Civil Engineers Annual Meeting, May 2021
- 2021 Earthquake Engineering Research Institute Annual Meeting, March 2021
- Consortium of Organizations for Strong Motion Observation Systems (COSMOS) Technical Session, January 2021
- Offshore Structures Reliability Conference, Delft University, the Netherlands, November 2020
- National Earthquake Conference, San Diego, March 2020
- US Geological Survey, Golden, CO, September 2019
- US Geological Survey, Menlo Park, CA, February 2019
- ASCE Los Angeles and Orange County Geo-Institute, Los Angeles, December 2018
- AECOM International Seismic Hazards Workshop, Los Angeles, December 2018
- Short course for Stanford Center for Induced and Triggered Seismicity Affiliates, Stanford, May 2015
- SMIP14 Seminar on Utilization of Strong Motion Data, Berkeley, October 2014
- Structural Engineers Association of Northern California, San Francisco, May 2014
- Seismological Society of America Annual Meeting, Salt Lake City, Utah, April 2013
- Structural Engineers Association of Northern California, San Francisco, June 2012
- Centre for Energy Advancement through Technological Innovation (CEATI) Seismic Hazard and Risk Workshop for Hydropower Projects, San Francisco, May 2012

- Structural Engineers Association of Northern California Seismology Committee, San Francisco, May 2011
- Workshop on the Applications of Precarious Rocks and Related Fragile Geological Features to US National Hazard Maps, Reno, October 2010
- CUREE-Kajima Phase IIV final project meeting, Tokyo, October 2010
- PEER Annual Meeting, San Francisco, October 2010
- Southern California Earthquake Center workshop on Extreme Ground Motions, September 2010
- U.S. Geological Survey, Golden, Colorado, February 2010
- Pacific Earthquake Engineering Research Center Transportation Networks Workshop, Berkeley, California, March 2009
- U.S. Geological Survey, Menlo Park, California, February 2009
- European Union Robustness of Structures, 1st Workshop (COST Action TU601), ETH Zurich, Switzerland, February 2008
- COSMOS Technical Workshop, Berkeley, California, November 2006
- First workshop on ground motion selection and modification for nonlinear analysis, Berkeley, California, October 2006
- Natural Hazards Mitigation in Japan Research Symposium, June 2004

OTHER PRESENTATIONS AT CONFERENCES AND SYMPOSIA (SINCE 2018, INCLUDING CO-AUTHORED PRESENTATIONS)

"Regional hazard and exposure modeling for wildfire risk assessment," 2025 SimCenter Computational Symposium.

"From Uncertainty Toward Action: Climate Risk Modeling and Robust Decision-Making Under Uncertainty," 2025 SimCenter Computational Symposium.

"Combining exposure data and vulnerability models for regional multi-hazard risk assessment," 2025 SimCenter Computational Symposium.

"Comparative analysis of macroeconomic models for indirect impacts of disasters," 2025 SimCenter Computational Symposium.

"Assessing Urban Post-Earthquake Community Recovery to Inform Pre-Disaster Planning," 2024 NIST-NSF Disaster Resilience Research Symposium. 2024.

"A predictive model for post-earthquake displacement based on housing damage and social factors," 18th World Conference on Earthquake Engineering. 2024.

"Next-generation geologic hazard event scenarios to support decision-making for community resilience," 18th World Conference on Earthquake Engineering. 2024.

"Bayesian analysis to account for path and site effects in spatial ground motion correlation models," 18th World Conference on Earthquake Engineering. 2024.

- "Deep-learning-based seismic risk assessment and retrofitting of road networks," Pacific Earthquake Engineering Research Center Annual Meeting, 2023.
- "Assessing Urban Post-Earthquake Community Recovery to Inform Pre-Disaster Planning," 2023 NIST-NSF Disaster Resilience Research Symposium, 2023.
- "Using engineering models to compare social impacts of multiple hazards," 2023 Natural Hazards Center Researchers Meeting, 2023.
- "Spatial correlation in ground motion intensities: Measurement, prediction, and seismic risk implications," 49th Risk, Hazard and Uncertainty Workshop, 2023.
- "Participatory Scenario-based Approaches for Addressing Risk in Multi-hazard Contexts," American Geophysical Union Fall Meeting, 2023.
- "Functional recovery of tall buildings with pre-Northridge welded steel moment frames," Pacific Conference on Earthquake Engineering, 2023.
- "Combining Climate Change driven Sea Level Rise and Multi-hazard Impacts on the Built Environment," 2022 American Geophysical Union Fall Meeting
- "Coastal Multi-hazard Workflow considering Sea Level Rise and various Impact Metrics," 2022 American Geophysical Union Fall Meeting.
- "Improving Scenario Effectiveness in Motivating Mitigation for Geologic Hazards." 2022 American Geophysical Union Fall Meeting.
- "Occurrence and Impacts of Atmospheric River Sequences in Present and Future Climates," International Atmospheric River Conference 2022.
- "Deep learning-based retrofitting and seismic risk assessment of road networks," 2022 PEER Researchers' Workshop.
- "Deep learning-based retrofitting and seismic risk assessment of road networks," 4th Kenji Ishihara Colloquium Series on Earthquake Engineering.
- "Disaster resilience of infrastructure systems," 43rd International Association for Energy Economics International Conference.
- "Deducing Current Individual Household Income From Publicly Available Data," 2022 Natural Hazards Center Researchers Meeting.
- "Modeling Rental Unit-Landlord Dependency for Post-Disaster Recovery," 2022 Natural Hazards Center Researchers Meeting.
- "Combining Multi-Hazard Coastal Impacts Due to Climate Change," 2022 Natural Hazards Center Researchers Meeting.
- "Future directions in earthquake risk assessment: High-fidelity optimization," Seismic Moment: From Rupture to Recovery symposium, 2022.

- "Guidance on utilization of simulations in engineering practice, and an example ground motion set" Consortium of Organizations for Strong Motion Observation Systems (COSMOS) Technical Session, January 2021.
- "Getting published in Earthquake Spectra" 2021 Earthquake Engineering Research Institute Annual Meeting, March 2021.
- "Transitioning from Graduate Studies to Securing Faculty Positions" Canadian Society of Civil Engineers Annual Meeting student committee session. May 2021.
- "Spatial correlations in CyberShake ground motion simulations: Validation and estimation of non-stationarities" Jack Baker and Yilin Chen. 2021 PEER International Pacific Rim Forum. June 2021.
- "A model for predicting response spectra while considering near-fault pulse-like motions," U.S. Geological Survey National Seismic Hazard Mapping Project workshop on Seismic Directivity. October 2021.
- "Getting Published, with a focus on Earthquake Spectra" 2021 Earthquake Engineering Research Institute Annual Meeting, March 2021.
- "Differential household recovery: the factors not accounted for by a damage-based earthquake reconstruction policy and the disparate long-term results," Earthquake Engineering Research Institute Annual Meeting, 2021.
- "Integrating Place Satisfaction into Housing Recovery Simulations," Natural Hazards Center Researchers Meeting. 2021.
- "Contributors to Long-Term Recovery in Nepal: A Longitudinal Study Over Five Years," Natural Hazards Center Researchers Meeting. 2021.
- "Deep-Learning Based Seismic Risk Assessment of Road Networks" PEER Researchers' Workshop. 2021.
- "A Performance-Based Approach to Quantifying Atmospheric River Flood Risk in Northern California," AGU Fall meeting, 2021.
- "Using hypocenter-mapped fault structures for regional seismic risk analysis: A case study of Oklahoma County," AGU Fall meeting, 2021.
- "Selection of simulated CyberShake time series for engineering building code analyses" National Earthquake Conference, San Diego, March 2020.
- "Assessing the Safety of Tall Pre-Northridge Steel Frame Buildings and Implications on Post-Earthquake Cordoning and Recovery," National Earthquake Conference, San Diego, March 2020.
- "U.S. Practice of performance-based engineering and treatment of epistemic uncertainty" Offshore Structures Reliability Conference. Delft University, the Netherlands, November 2020. (Virtual)

- "Selection of CyberShake Simulated Ground Motion Time Series for Engineering Analysis (invited presentation)" 2020 American Geophysical Union Fall Meeting (Virtual).
- "Identifying Key Damage Drivers of Atmospheric River-Induced Flooding in Northern California" 2020 American Geophysical Union Fall Meeting (Virtual).
- "Climate change and management decisions could transfer flood risk to socioeconomically disadvantaged communities along the San Francisquito Creek, California" 2020 American Geophysical Union Fall Meeting (Virtual).
- "Short-Term Probabilistic Hazard Assessment in Regions of Induced Seismicity" 2020 American Geophysical Union Fall Meeting (Virtual).
- "Consideration of network effects in identifying critical components of transportation infrastructure," *US Geological Survey's Geologic Hazards Science Seminar Series*, Golden, CO, September 2019.
- "Use of ground motion simulations in engineering practice," *US Geological Survey Earthquake Science Seminar*, Menlo Park, CA, February 2019.
- "Short-term probabilistic hazard assessment in regions of induced seismicity" at the SPE/SEG workshop, Injection Induced Seismicity – The Next Chapter, 2019.
- "The Cascading Consequences of Sea Level Rise: Evaluating Flood-Induced Commute Disruption in the San Francisco Bay Area" at the 2019 Natural Hazards Workshop and Researchers Meeting.
- "Data integration framework to rapidly estimate post-disaster damage for response and recovery planning" at the 2019 Natural Hazards Workshop and Researchers Meeting.
- "Compound flood risk in the south San Francisco Bay: A city manager's worst nightmare," at the Workshop on Correlated Extremes organized by Columbia University's Initiative on Extreme Weather and Climate.
- "Learning to Manage Bridges Subject to Seismic Hazard Using a Deep Q-network" at the 2019 Pacific Earthquake Engineering Research Center Annual Meeting.
- "Modeling Bay Area Transportation Network Resilience" at the 2019 Pacific Earthquake Engineering Research Center Annual Meeting.
- "Modeling Bay Area transportation network resilience" *PEER Researchers' Workshop*. University of California, Berkeley. August 2018.
- "Quantifying seismic risk to transportation networks: user impacts and at-risk communities." Blume Center/SURI Affiliates and Alumni Meeting. 2018.
- "Stochastic Optimization for Maintenance Decisions in Transportation Networks under Seismic Hazard" *INFORMS Annual Meeting*. San Francisco. 2018.
- "Build human capacity through formal education, direct experience, and learning from others." *Hoover Institution workshop, Ready for Tomorrow: Achieving Climate-Resilient Infrastructure*. 2018.

"Quantifying Seismic Risk to Transportation Networks: User Impacts and At-Risk Communities," *ASCE Los Angeles and Orange County Geo-Institute*, 2018.

"Ground motion selection for performance-based engineering, and the Conditional Mean Spectrum as a selection tool," *AECOM International Seismic Hazards Workshop*, 2018.

"Spatial Integration of Modeled, Remotely-sensed, and Field Surveyed Building Damage Data to Support Post-Earthquake Response and Recovery Decisions." *AGU Annual Meeting*, 2018.

"Rethinking return levels: Towards a meaningful assessment of flood risk in a changing climate." *AGU Annual Meeting*, 2018.

When Floods Hit the Road: Commute Disruption due to Coastal Flooding and Sea Level Rise in the San Francisco Bay Area." *AGU Annual Meeting*, 2018.

PUBLICATIONS (STUDENT NAMES IN BOLD, POSTDOC NAMES IN ITALICS)

Google Scholar: <https://scholar.google.com/citations?user=im82jgIAAAAJ&hl>

Typical authorship convention: for student-authored publications, the student is the first author, and the advisor is the last author. For other authorship positions or larger collaborative papers, authorship order denotes contribution level.

Textbooks

Baker, J. W., Bradley, B. A., and Stafford, P. J. (2021). *Seismic Hazard and Risk Analysis*. Cambridge University Press, Cambridge, England. 581p.

Archival Journal Publications

1. **Mongold, E.**, and Baker, J. W. (2025). "Quantifying climate change risk through natural hazard losses to inform adaptation action." *Climatic Change*, 178(4), 82.
2. **Paul, N.**, Galasso, C., Baker, J., and Silva, V. (2025). "A predictive model for household displacement duration after disasters." *Risk Analysis*.
3. Minson, S. E., Baltay, A. S., Cochran, E. S., Nevitt, J. M., Hickman, S. H., Thatcher, W. R., Baker, J. W., and Diggles, M. F. (2025). "Tom Hanks—A Remembrance." *Seismological Research Letters*, 96(1), 7–8.
4. **Lee, J.**, *Costa, R.*, and Baker, J. W. (2024). "Post-disaster housing recovery estimation: Data and lessons learned from the 2017 Tubbs and 2018 Camp Fires." *International Journal of Disaster Risk Reduction*, 104912.
5. **Paul, N.**, Galasso, C., Silva, V., and Baker, J. (2024). "Population displacement after earthquakes: benchmarking predictions based on housing damage." *Seismica*, 3(2).
6. **Zhu, T.**, **Issa, O.**, Markhvida, M., *Costa, R.*, and Baker, J. W. (2024). "Multi-regional economic recovery simulation using an Adaptive Regional Input–Output (ARIO) framework." *International Journal of Disaster Risk Reduction*, 112, 104766.
7. **Mongold, E.**, and Baker, J. W. (2024). "Probabilistic Regional Liquefaction Hazard and Risk Analysis: A Case Study of Residential Buildings in Alameda, California." *Natural Hazards Review*, 25(4), 04024039.

8. Baker, J. W., Crowley, H., Wald, D., Rathje, E., Au, S.-K., Bradley, B. A., Burton, H., Cabas, A., Cattari, S., Cauzzi, C., Cavalieri, F., Contreras, S., Costa, R., Eguchi, R. T., Lallemand, D., Lignos, D. G., Maurer, B. W., Molina Hutt, C., Sextos, A., Seyhan, E., Silva, V., Sucuoğlu, H., Taciroglu, E., and Thompson, E. M. (2024). "Sharing data and code facilitates reproducible and impactful research." *Earthquake Spectra*, 40(3), 2210–2218.
9. Sánchez-Silva, M., and Baker, J. W. (2024). "Dynamic Infrastructure Systems: advancing sustainable urbanization and climate change." *Environment Systems and Decisions*, 44, 489–499.
10. **Bodenmann, L.**, Baker, J. W., and Stojadinović, B. (2024). "Accounting for ground motion uncertainty in empirical seismic fragility modeling." *Earthquake Spectra* 40(4), 2456–2474.
11. **Bowers, C.**, Serafin, K. A., and Baker, J. W. (2024). "Uncovering Drivers of Atmospheric River Flood Damage using Interpretable Machine Learning." *Natural Hazards Review*, 25(3), 04024022.
12. **Bowers, C.**, Serafin, K. A., and Baker, J. W. (2024). "Temporal compounding increases economic impacts of atmospheric rivers in California." *Science Advances*, 10(3), eadi7905.
13. **Mongold, E.**, Costa, R., Zsarnóczy, Á., and Baker, J. W. (2024). "Modeling post-disaster recovery: Accounting for rental and multi-family housing." *Earthquake Spectra*, 40(2), 1353–1375.
14. **Hulsey, A. M.**, **Galvis, F. A.**, Baker, J. W., and Deierlein, G. G. (2024). "Elevated collapse risk based on decaying aftershock hazard and damaged building fragilities." *Earthquake Spectra*, 40(1), 674–704.
15. **Paul, N.**, Galasso, C., and Baker, J. (2024). "Household Displacement and Return in Disasters: A Review." *Natural Hazards Review*, American Society of Civil Engineers, 25(1), 03123006.
16. Costa, R., and Baker, J. W. (2024). "A methodology to estimate postdisaster unmet housing needs using limited data: Application to the 2017 California wildfires." *Risk Analysis*, 44(4), 850–867.
17. Baker, J. W., Almeter, E., Cook, D., Liel, A. B., and Haselton, C. (2024). "A model for partially dependent component damage fragilities in seismic risk analysis." *Earthquake Spectra*, 40(1), 609–628.
18. **Bowers, C.**, **Serafin, K. A.**, Tseng, K.-C., and Baker, J. W. (2023). "Atmospheric River Sequences as Indicators of Hydrologic Hazard in Historical Reanalysis and GFDL SPEAR Future Climate Projections." *Earth's Future*, 11(12), e2023EF003536.
19. Tarbali, K., Bradley, B. A., and Baker, J. W. (2023). "Effect of near-fault directivity pulses on ground-motion intensity measure correlations from the NGA-West2 data set." *Earthquake Spectra*, 39(4), 2263–2280.
20. **Issa, O.**, **Silva-Lopez, R.**, Baker, J. W., and Burton, H. V. (2023). "Machine-learning-based optimization framework to support recovery-based design." *Earthquake Engineering & Structural Dynamics*, 52(11), 3256–3280.
21. Burton, H. V., and Baker, J. W. (2023). "Evaluating the effectiveness of ground motion intensity measures through the lens of causal inference." *Earthquake Engineering & Structural Dynamics*, 52(15), 4842–4864.
22. **Silva Lopez, R.**, and Baker, J. W. (2023). "Optimal bridge retrofitting selection for seismic risk management using genetic algorithms and neural network-based surrogate models." *ASCE Journal of Infrastructure Systems*, 29(4), 04023030.

23. **Galvis, F. A., Hulsey, A. M., Baker, J. W., and Deierlein, G. G.** (2023). "Simulation-Based Methodology to Identify Damage Indicators and Safety Thresholds for Post-Earthquake Evaluation of Structures." *Earthquake Engineering & Structural Dynamics*, 52(11), 3455–3476.
24. **Bodenmann, L., Baker, J. W., and Stojadinović, B.** (2023). "Accounting for path and site effects in spatial ground-motion correlation models using Bayesian inference." *Natural Hazards and Earth System Sciences*, 23(7), 2387–2402.
25. **Markhvida, M., and Baker, J. W.** (2023). "Modeling future economic costs and interdependent industry recovery after earthquakes." *Earthquake Spectra*, 39(2), 914–937.
26. **Madden, I., Mariwala, A., Lindhart, M., Narayan, S., Arkema, K., Beck, M., Baker, J., and Suckale, J.** (2023). "Quantifying the fragility of the coral reefs to hurricane impacts: A case study of the Florida Keys and Puerto Rico." *Environmental Research Letters*, 18, 024034.
27. **Loos, S., Lallemand, D., Khan, F., McCaughey, J. W., Banick, R., Budhathoki, N., and Baker, J. W.** (2023). "A data-driven approach to rapidly estimate recovery potential to go beyond building damage after disasters." *Communications Earth & Environment*, 4(40).
28. **Bhattacharjee, G., and Baker, J. W.** (2023). "Using global variance-based sensitivity analysis to prioritise bridge retrofits in a regional road network subject to seismic hazard." *Structure and Infrastructure Engineering*, 19(2), 164–177.
29. **Silva-Lopez, R., and Baker, J. W.** (2022). "Use of corridors to select bridges to retrofit in road networks in seismic regions." *Sustainable and Resilient Infrastructure*, 7(6), 901–917.
30. **Silva-Lopez, R., Bhattacharjee, G., Poulos, A., and Baker, J. W.** (2022). "Commuter welfare-based probabilistic seismic risk assessment of regional road networks." *Reliability Engineering & System Safety*, 108730.
31. **Wang, C., Costa, R., and Baker, J. W.** (2022). "Simulating post-disaster temporary housing needs for displaced households and out-of-town contractors." *Earthquake Spectra*, 38(4), 2922–2940.
32. **Bassman, T. J., Zhong, K., and Baker, J. W.** (2022). "Evaluation of conditional mean spectra code criteria for ground motion selection." *ASCE Journal of Structural Engineering*, 148(11), 04022177.
33. **Costa, R., Wang, C., and Baker, J. W.** (2022). "Integrating Place Attachment into Housing Recovery Simulations to Estimate Population Losses." *Natural Hazards Review*, American Society of Civil Engineers, 23(4), 04022021.
34. **Loos, S., Levitt, J., Tomozawa, K., Baker, J. W., and Lallemand, D.** (2022). "Efficacy of damage data integration: A comparative analysis of four major earthquakes." *Natural Hazards Review*, 23(4), 04022026. *Selected Editor's Choice*.
35. **Bowers, C., Serafin, K. A., and Baker, J. W.** (2022). "A Performance-Based Approach to Quantify Atmospheric River Flood Risk." *Natural Hazards and Earth System Sciences*, 22(4), 1371–1393.
36. **Hulsey, A., Baker, J. W., and Deierlein, G. G.** (2022). "High-Resolution Post-Earthquake Recovery Simulation: Impact of Safety Cordons." *Earthquake Spectra*, 38(3), 2061–2087.
37. **Zhong, K., Chandramohan, R., Baker, J. W., and Deierlein, G. G.** (2022). "Site-specific adjustment framework for incremental dynamic analysis (SAF-IDA)." *Earthquake Spectra*, 38(3), 1893–1917.
38. **Silva Lopez, R., Baker, J. W., and Poulos, A.** (2022). "Deep learning-based retrofitting and seismic risk assessment of road networks." *ASCE Journal of Computing in Civil Engineering*, 36(2), 04021038.

39. **Teng, G.**, Baker, J. W., and Wald, D. J. (2022). "Evaluation of intensity prediction equations (IPes) for small-magnitude earthquakes." *Bulletin of the Seismological Society of America*, 112(1), 316–330.
40. Poulos, A., Miranda, E., and Baker, J. W. (2022). "Evaluation of Earthquake Response Spectra Directionality Using Stochastic Simulations." *Bulletin of the Seismological Society of America*, 112(1), 307–315.
41. *Kwong, N. S.*, Jaiswal, K. S., Baker, J. W., Luco, N., Ludwig, K. A., and Stephens, V. (2022). "Earthquake Risk of Gas Pipelines in the Conterminous United States and its Sources of Uncertainty." *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, 8(1), 04021081.
42. Argyroudis, S. A., Mitoulis, S. A., Chatzi, E., Baker, J. W., Brilakis, I., Gkoumas, K., Vousdoukas, M., Hynes, W., Carluccio, S., Keou, O., Frangopol, D. M., and Linkov, I. (2021). "Digital technologies can enhance global climate resilience of critical infrastructure." *Climate Risk Management*, 100387¹.
43. **Teng, G.**, and Baker, J. W. (2021). "Post shut-in hazard for hydraulic-fracturing-induced earthquakes: Analysis using data from the Guy-Greenbrier earthquake sequence." *Journal of Seismology*, (in press).
44. **Chen, Y.**, Bradley, B. A., and Baker, J. W. (2021). "Nonstationary spatial correlation in New Zealand strong ground-motion data." *Earthquake Engineering & Structural Dynamics*, 50(13), 3421–3440.
45. *Costa, R.*, and Baker, J. W. (2021). "SMOTE-LASSO Model of business recovery over time - case study of the 2011 Tohoku earthquake." *Natural Hazards Review*, 22(4), 04021038.
46. Baker, J. W., Goulet, C., Luco, N., Rezaeian, S., and **Teng, G.** (2020). "A Subset of CyberShake Ground Motion Time Series for Response History Analysis." *Earthquake Spectra*, 37(2) 1162–1176.
47. **Chen, Y.**, and Baker, J. W. (2021). "Community Detection in Spatial Correlation Graphs: Application to Non-stationary Ground Motion Modeling." *Computers and Geosciences*, 154, 104779.
48. **Cremen, G.**, and Baker, J. W. (2021). "Variance-based Sensitivity Analyses and Uncertainty Quantification for FEMA P-58 Consequence Predictions." *Earthquake Engineering & Structural Dynamics*, 50(3), 811–830.
49. **Loos, S.**, Lallemand, D., Baker, J. W., McCaughery, J., Yun, S.-H., Budhathoki, N., Khan, F., and Singh, R. (2020). "G-DIF: A geospatial data integration framework to rapidly estimate post-earthquake damage." *Earthquake Spectra*, 36(4), 1695–1718².
50. Baker, J. W., and **Chen, Y.** (2020). "Ground motion spatial correlation fitting methods and estimation uncertainty." *Earthquake Engineering & Structural Dynamics*, 49(15), 1662–1681.
51. **Teng, G.**, and Baker, J. W. (2020). "Short-term probabilistic hazard assessment in regions of induced seismicity." *Bulletin of the Seismological Society of America*, 110(5), 2441-2453.
52. Schultz, R., Beroza, G. C., Ellsworth, W. L., and Baker, J. W. (2020). "Risk-informed recommendations for managing hydraulic fracturing induced seismicity via traffic light protocols." *Bulletin of the Seismological Society of America*, 110(5), 2411-2422.

¹ Thorpe Medal Winner, recognizing a paper that contributes to either practical or research aspects of engineering informatics disciplines in the built environment.

² Recipient of the 2020 Earthquake Spectra Graduate Student Paper Award

53. **Wu, J.**, and Baker, J. W. (2020). "Statistical Learning Techniques for the Estimation of Lifeline Network Performance and Retrofit Selection." *Reliability Engineering & System Safety*, 200, 106921.
54. *Zsarnóczyay, Á.*, and Baker, J. W. (2020). "Using model error in response history analysis to evaluate component calibration methods." *Earthquake Engineering & Structural Dynamics*, 49(2), 175–193.
55. **Markhvida, M.**, Walsh, B., Hallegatte, S., and Baker, J. W. (2020). "Quantification of disaster impacts through household well-being losses." *Nature Sustainability*, 3, 538–547.
56. **Cremen, G.**, Seville, E., and Baker, J. W. (2019). "Modeling Post-Earthquake Business Recovery Time: An Analytical Framework." *International Journal of Disaster Risk Reduction*, 40, 101328.
57. **Chen, Y.**, and Baker, J. W. (2019). "Spatial correlations in CyberShake physics-based ground motion simulations." *Bulletin of the Seismological Society of America*, 109(6), 2447-2458.
58. **Teng, G.**, and Baker, J. W. (2019). "Seismicity Declustering and Hazard for Oklahoma and Kansas." *Bulletin of the Seismological Society of America*, 109(6), 2356–2366.
59. **Teng, G.**, and Baker, J. W. (2019). "Evaluation of CyberShake time series for engineering practice." *Earthquake Spectra*, 35(3), 1311–1328³.
60. Silva, V., Akkar, S., Baker, J.W., Bazzurro, P., Castro, J. M., Crowley, H., Dolsek, M., Galasso, C., Lagomarsino, S., Monteiro, R., Perrone, D., Pitilakis, K., and Vamvatsikos, D. (2019). "Current Challenges and Future Trends in Analytical Fragility and Vulnerability Modelling." *Earthquake Spectra*, 35(4), 1927-1952.
61. **Cremen, G.**, and Baker, J. W. (2019). "Improving FEMA P-58 Non-Structural Component Fragility Functions and Loss Predictions." *Bulletin of Earthquake Engineering*, 17(4), 1941–1960.
62. **Gupta, A.**, and Baker, J. W. (2019). "A framework for time-varying induced seismicity risk assessment, with application in Oklahoma." *Bulletin of Earthquake Engineering*, 17(8), 4475–4493.
63. **Cremen, G.**, and Baker, J. W. (2019). "A Methodology for Benchmarking Loss Predictions of the FEMA P-58 Seismic Performance Assessment Procedure." *Earthquake Spectra*, 35(1), 193–210.
64. Tarbali, K., Bradley, B. A., and Baker, J. W. (2019). "Ground Motion Selection in the Near-Fault Region Considering Directivity-Induced Pulse Effects." *Earthquake Spectra*, 35(2), 759–786.
65. *Gomez, C.*, and Baker, J. W. (2019). "An optimization-based decision support framework for coupled pre- and post-earthquake infrastructure risk management." *Structural Safety*, 77, 1–9.
66. **Cremen, G.**, and Baker, J. W. (2018). "Quantifying the Benefits of Building Instruments to FEMA P-58 Rapid Post-Earthquake Damage and Loss Predictions." *Engineering Structures*, 176, 243–253.
67. **Markhvida, M.**, and Baker, J. W. (2018). "Unification of seismic performance estimation and real estate investment analysis to model post-earthquake building repair decisions⁴." *Earthquake Spectra*, 34(4), 1787–1808.
68. Tarbali, K., Bradley, B. A., and Baker, J. W. (2018). "Consideration and Propagation of Ground Motion Selection Epistemic Uncertainties to Seismic Performance Metrics." *Earthquake Spectra*, 34(2), 587–610.

³ Recipient of the 2019 Earthquake Spectra Graduate Student Paper Award

⁴ Recipient of the 2018 Earthquake Spectra Graduate Student Paper Award

69. Baker, J. W., and Lee, C. (2018). "An Improved Algorithm for Selecting Ground Motions to Match a Conditional Spectrum." *Journal of Earthquake Engineering*, 22(4), 708–723.
70. Worden, C. B., Thompson, E. M., Baker, J. W., Bradley, B. A., Luco, N., and Wald, D. J. (2018). "Spatial and Spectral Interpolation of Ground-Motion Intensity Measure Observations." *Bulletin of the Seismological Society of America*, 108(2), 866–875.
71. **Markhvida, M.**, Ceferino, L., and Baker, J. W. (2018). "Modeling spatially correlated spectral accelerations at multiple periods using principal component analysis and geostatistics." *Earthquake Engineering & Structural Dynamics*, 47(5), 1107–1123.
72. Bradley, B. A., Pettinga, D., Baker, J. W., and Fraser, J. (2017). "Guidance on the utilization of earthquake-induced ground motion simulations in engineering practice." *Earthquake Spectra*, 33(3), 809–835.
73. Baker, J. W., and Bradley, B. A. (2017). "Intensity Measure Correlations Observed in the NGA-West2 Database, and Dependence of Correlations on Rupture and Site Parameters." *Earthquake Spectra*, 33(1), 145–156.
74. **Gokkaya, B. U.**, Baker, J. W., and Deierlein, G. G. (2017). "Estimation and Impacts of Model Parameter Correlation for Seismic Performance Assessment of Reinforced Concrete Structures." *Structural Safety*, 69, 68–78.
75. **Gupta, A.**, Baker, J. W., and Ellsworth, W. L. (2017). "Assessing ground motion amplitudes and attenuation for small to moderate induced and tectonic earthquakes in the Central and Eastern United States." *Seismological Research Letters*, 88(5), 1379–1389.
76. Haselton, C. B., Baker, J. W., Stewart, J. P., Whittaker, A. S., Luco, N., Fry, A., Hamburger, R. O., Zimmerman, R. B., Hooper, J. D., Charney, F. A., and Pekelnicky, R. G. (2017). "Response History Analysis for the Design of New Buildings in the NEHRP Provisions and ASCE/SEI 7 Standard: Part I - Overview and Specification of Ground Motions." *Earthquake Spectra*, 33(2), 373–395.
77. Haselton, C. B., Fry, A., Hamburger, R. O., Baker, J. W., Zimmerman, R. B., Luco, N., Elwood, K. J., Hooper, J. D., Charney, F. A., Pekelnicky, R. G., and Whittaker, A. S. (2017). "Response History Analysis for the Design of New Buildings in the NEHRP Provisions and ASCE/SEI 7 Standard: Part II - Structural Analysis Procedures and Acceptance Criteria." *Earthquake Spectra*, 33(2), 397–417.
78. Zimmerman, R. B., Baker, J. W., Hooper, J. D., Bono, S., Haselton, C. B., Engel, A., Hamburger, R. O., Celikbas, A., and Jalalian, A. (2017). "Response History Analysis for the Design of New Buildings in the NEHRP Provisions and ASCE/SEI 7 Standard: Part III - Example Applications Illustrating the Recommended Methodology." *Earthquake Spectra*, 33(2), 419–447.
79. **Gupta, A.**, and Baker, J. W. (2017). "Estimating Spatially Varying Event Rates with a Change Point using Bayesian Statistics: Application to Induced Seismicity." *Structural Safety*, 65, 1–11.
80. **Chandramohan, R.**, Baker, J. W., and Deierlein, G. G. (2016). "Quantifying the influence of ground motion duration on structural collapse capacity using spectrally equivalent records." *Earthquake Spectra*, 32(2), 927–950.
81. **Seifried, A.E.**, and Baker, J. W. (2016). "Spectral Variability and its Relationship to Structural Response Estimated from Scaled and Spectrum-Matched Ground Motions." *Earthquake Spectra*, 32(4), 2191–2205.

82. **Gokkaya, B. U.**, Baker, J. W., and Deierlein, G. G. (2016). "Quantifying the Impacts of Modeling Uncertainties on the Seismic Drift Demands and Collapse Risk of Buildings with Implications on Seismic Design Checks." *Earthquake Engineering & Structural Dynamics*, 45(10), 1661–1683.
83. Baker, J. W., and **Gupta, A.** (2016). "Bayesian Treatment of Induced Seismicity in Probabilistic Seismic Hazard Analysis." *Bulletin of the Seismological Society of America*, 106(3), 860–870.
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