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| Jack W. Baker | bakerjw@stanford.edu  650-555-5555  [www.jackwbaker.com](http://www.jackwbaker.com) | 473 Main Street, Room 195  Stanford, California 94305 |

### *CV Date: 8/12/2024*

### 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

### EXPERIENCE

2006 - present Assistant Professor of Civil & Environmental Eng., Stanford University

2005 - 2006 Postdoctoral Scholar, Swiss Federal Institute of Technology, Zurich

2004 Visiting Researcher, Nagoya University

2002 Project Engineer, Risk Management Solutions. Responsible for development of a first-generation model to analyze potential insurance losses from terrorist attacks

### HONORS AND AWARDS

* William B. Joyner Lecture Award, awarded jointly from the Seismological Society of America and the Earthquake Engineering Research Institute, 2023
* ASCE Walter L. Huber Civil Engineering Research Prize. Citation: “For research to characterize the damaging effects of earthquake ground motion spectral shape, duration, near-fault directivity and other features for seismic hazard analysis and performance-based engineering of buildings, bridges, and geographically distributed infrastructure.” 2018
* National Science Foundation CAREER Award, 2010

### 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.*

#### Archival Journal Publications

1. **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.
2. 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.
3. 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.
4. Loos, S., Lallemant, 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).

#### Other Publications

1. Galvis, F., Issa, O., Deierlein, G. G., Zsarnóczay, A., and Baker, J. W. (2024). “Earthquake losses and functional recovery of welded steel moment frames and their role in retrofit decisions.” *18th World Conference on Earthquake Engineering*, Milan, Italy.
2. Silva Lopez, R., and Baker, J. W. (2021). *Use of Corridors for Decision Making in Transportation Networks in Seismic Regions*. PEER Report No. 2021/09, Pacific Earthquake Engineering Research Center, Berkeley, California, 49p.

### PRESENTATIONS

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

“Physics-based ground motion simulations as a tool for earthquake engineering,” 18th World Conference on Earthquake Engineering, Milan, Italy, July 2024.

### FUNDED RESEARCH

ASSESSING URBAN POST-EARTHQUAKE COMMUNITY RECOVERY TO INFORM PRE-DISASTER PLANNING. (November 2021-November 2025), $309,441 (PI: Jack Baker). *National Science Foundation, Inc.*

MACHINE LEARNING FOR ANALYSIS AND RISK MANAGEMENT OF COMPLEX INFRASTRUCTURE SYSTEMS. (September 2021 – August 2022), $50,000 (PI: Jack Baker). *Pacific Earthquake Engineering Research Center (PEER)*.

### TEACHING EXPERIENCE

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

***Course # Title Term Enrollment***

CEE 289 Random Vibrations Win 2022 11

CEE 288 Seismic Hazard and Risk Win 2023 36

CEE 203 Probabilistic Models for CEE Aut 2023 61

CEE 288 Seismic Hazard and Risk Win 2024 32

### ADVISING

1. Cindy Lee, PhD, 2023
2. Francisco Silva, MS, 2022

### SERVICE

* Editor in Chief, Earthquake Spectra
* Steering Committee member for the U.S. Geological Survey National Seismic Hazard Model Program, 2020-present.
* Conference committee member for 14th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP14), 2023
* Paper reviewer for:
  + ASCE Journal of Structural Engineering
  + Geophysical Research Letters
  + Risk Analysis