

Jack W. Baker

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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

- 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.
- 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.

Commented [JWB1]: Provide one preferred phone number and e-mail address (more will cause confusion about where to reach you). A mailing address is not required, so don't worry if you don't have a stable work address and don't want to provide a personal address. If you have a website, I would include it so that readers can get more information about you if needed.

Commented [JWB2]: If you have a website that provides more information (e.g., software or copies of publications), put a link here so readers can easily find it.

Commented [JWB3]: Putting a date on your CV will help readers know how up-to-date the presented information is, and help them pick the newest one if they end up with multiple copies of your CV files.

Commented [JWB4]: If you are a student and have a high grade point average, feel free to list it here. But for people who have completed their education more than a few years ago, GPA is no longer considered relevant.

Commented [JWB5]: For lists of items with finite durations, list the dates, and list the items in chronological order (typically with the newest at the top). You might be tempted to put information in tables, with a column for the date. I have found that to be too much work to deal with when I add new information, so use this list style instead.

Commented [JWB6]: You can provide a bit of description here about your role and responsibilities (e.g., more than this). But don't write a paragraph, as it will get hard for a reader to quickly parse. And a description of each role is not required, especially as your CV gets longer. They can always ask questions in an interview if they want to know more.

Commented [JWB7]: If you have any awards, put them early on as they are a useful marker of you doing something notable. But don't worry if you are young and don't have any awards. Or if you have only one or two items and the list looks weird, you could also list the awards under your degrees in the prior Education section.

Consider whether items on your list indicate your qualifications for the positions you are trying to look for. Listing something like "Score of 93% on class final project" sounds like you are stretching for credentials and won't help your case.

Commented [JWB8]: It's fine to provide a citation or some extra context about an award if it helps the reader understand better what the award is.

Commented [JWB9]: When you are junior, put your publications list near the front of your CV, as it's important. As the list gets more than a couple of pages long, consider moving it to the bottom so that it doesn't obscure other sections.

Commented [JWB10]: As a student, I would put your name in bold on your paper lists, so it's easy for readers to find you in the author list. As a professor, I would highlight your advisees (and possibly yourself as well)

Commented [JWB11]: It's helpful to include a Google Scholar link so that readers can find copies of your papers. But they can easily find your profile with a search as well, so this isn't critical.

Commented [JWB12]: It's a good practice to state your field's typical authorship convention, as people may read your CV who have differing conventions, and so may not be able to infer your role in multi-author papers.

Commented [JWB13]: Peer-reviewed journal papers are typically valued a lot more than project reports or conference papers (unless your field has highly selective conferences). So it is helpful to have a separate subsection for the journal papers. It's fine to provide preprints or references to "in-review" papers as well. I wouldn't bother listing "in preparation" papers unless you are ... [1]

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.,** 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).

Other Publications

5. **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.
6. **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.

Commented [JWB14]: Provide at least the title, venue, and date for any presentations. If you list gets long, you can categorize into sub-categories, such as “Invited talks,” “University seminars,” and “Conference presentations”

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)*.

Commented [JWB15]: Research funding may be important for faculty members, but it’s not critical for graduate students, so don’t worry if you don’t have this section. However, if you got a fellowship or helped write a grant, by all means, note that. A fellowship or or travel grant can be listed as either an Award or Funding.

TEACHING EXPERIENCE

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>Enrollment</i>
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

Commented [JWB16]: As a faculty member it may work well to have tabular data like below. But if you’re a grad student, it may work better to have an individual entry for each class you taught or helped with, so that you can also include a sentence or two to describe your roles and responsibilities in each case.

ADVISING

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

Commented [JWB17]: Another category that is more important for faculty than grad students. But if you advised or mentored any students as a grad student, it is helpful to list them to provide evidence. You could consider briefly noting what your role in advising was as well (e.g., "co-supervised MS thesis project" or "academic mentor")

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:
 - o ASCE Journal of Structural Engineering
 - o Geophysical Research Letters
 - o Risk Analysis

Commented [JWB18]: This is one area where you can list something a bit outside of your technical field (e.g., being an officer in a student organization, or being on a sports team). If the service work shows your commitment to helping your communities, or shows your ability to lead or manage an organization, it may still be relevant.

Peer-reviewed journal papers are typically valued a lot more than project reports or conference papers (unless your field has highly selective conferences). So it is helpful to have a separate subsection for the journal papers. It's fine to provide preprints or references to "in-review" papers as well. I wouldn't bother listing "in preparation" papers unless you are a student and don't have many other papers published, as readers can't evaluate the quality or degree of completion of such papers. If you do list in-preparation papers, do it in a separate subsection to acknowledge their different status and avoid obscuring the completed publications.