

# Pengfei Wang

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## Education

### University of California, Los Angeles

Ph.D., Civil Engineering, 2016-2020.  
M.S., Statistics, 2017-2020.  
M.S., Civil Engineering, 2015-2016

### Tongji University, Shanghai, China

B.E., Transportation Engineering, 2011-2015.

### École polytechnique fédérale de Lausanne - EPFL, Switzerland

Undergrad exchange program, 2015.01-2015.06

## Research Interests

Geotechnical Earthquake Engineering, Seismic Hazard Assessment, Applied Statistics and Machine Learning

## Dissertations

Ph.D. in Civil Engineering  
“Predictability and Repeatability of Non-Ergodic Site Response for Diverse Geological Conditions”

M.S. in Statistics  
“Geo-spatial Learning and Modeling for Seismic Site Responses in Los Angeles County”

## Publications

### Journal Articles

- Ahdi, S.K., Mazzoni, S., Kishida, T., **Wang, P.**, Nweke, C.C., Kuehn, N.M., Contreras, V., Rowshandel, B., Stewart, J.P., Bozorgnia, Y.. (2020). Engineering Characteristics of Ground Motions Recorded in the 2019 Ridgecrest Earthquake Sequence. *Bulletin of the Seismological Society of America*. **110** (4): 1474-1494.
- Brandenberg, S.J., Stewart, J.P., **Wang, P.**, Nweke, C.C., Hudson, K., Goulet, C.A., Meng, X., Davis, C.A., Ahdi, S.K., Hudson, M.B., Donnellan, A., Lyzenga, G., Pierce, M., Wang, J., Winters, M.A., Delisle, M.-P., Lucey, J., Kim, Y., Gallien, T.W., Lyda, A., Yeung, J.S., Issa, O., Buckreis, T., Yi, Z.. (2019). Ground Deformation Data from GEER Investigations of Ridgecrest Earthquake Sequence. *Seismological Research Letters*. **91** (4): 2024-2034.
- Zheng, N., Dantsuji, T., **Wang, P.**, Geroliminis, N.. (2017). Macroscopic Approach for Optimizing Road Space Allocation of Bus Lanes in Multimodal Urban Networks Through Simulation Analysis. *Journal of the Transportation Research Board*. **No. 2651**, DOI: 10.3141/2651-05.

### Submitted Journal Articles

- Wang, P.**, Tasi, Y.T., Stewart, J.P., Mikami, A., Brandenberg, S.J.. Region-Specific Linear Site Amplification Model for Peaty Organic Soil Sites in Hokkaido, Japan. *Earthquake Spectra*. (Under review).

1. **Wang, P.**, Zimmaro, P., Buckreis, T.E., Gospe, T., Brandenburg, S.J., Ahdi, S.K., Yong, A., Stewart, J.P.. Relational Database for Horizontal-to-Vertical Spectral Ratios. *Seismological Research Letters*. (Under review).

## Conference Papers

4. Zimmaro, P., **Wang, P.**, Asimaki, D., Bullock Z.N., Rathje, E.M., Ojomo, O., Donahue, J.L., Bozorgnia, Y., Mosleh, A., Stewart, J.P.. (2021). Regional-Scale Geohazards Evaluation for Risk Assessment of Natural Gas Storage and Transmission Infrastructure. Proceeding of the Geo-Extreme 2021 Conference, ASCE.
3. **Wang, P.**, Stewart, J.P.. (2019). Data-Derived Site Response and its Predictability Using Ergodic and Site-Specific Methods. Proceeding of SMIP2019 Seminar on Utilization of Strong Motion Data, California Strong Motion Instrumentation Program, UCLA, CA. October 18.
2. Stewart, J.P., **Wang, P.**, Teague, D.P., Vecchietti, A.. (2019). Applications of non-ergodic site response in ground motion modeling. Proceeding of 7th International Conference on Earthquake Geotechnical Engineering (Invited Keynote), Rome, Italy. June 17-20, P: 51-70.
1. Nweke, C.C., **Wang, P.**, Brandenburg, S.J., Stewart, J.P.. (2018). Reconsidering Basin Effects in Ergodic Site Response Models. Proceeding of SMIP2018 Seminar on Utilization of Strong Motion Data, California Strong Motion Instrumentation Program, Sacramento, CA. October 19.

## Technical Reports

4. Stewart, J.P., Brandenburg, S.J., **Wang, P.**, Nweke, C.C., Hudson, K., Mazzoni, S., Bozorgnia, Y., Goulet, C.A., Hudnut, K.W., Davis, C.A., Adhi, S.K., Zareian, F., Fayaz, J., Koehler, R.D., Chupik, C., Pierce, I., Williams, A., Akciz, S., Hudson, M.B., Kishida, T.. (2019). Preliminary Report on Engineering and Geological Effects of the July 2019 Ridgecrest Earthquake Sequence. Report No. GEER-064. DOI: 10.18118/G6H66K.
3. **Wang, P.**, Zimmaro, P., Ahdi, S.K., Kwak, D.Y., Stewart, J.P.. (2019). Shear Wave Velocity Database and Its Application for Analysis of Non-Ergodic Site Amplification Effects. U.S. Geological Survey, Report No. G17AP00018.
2. Kayen, R., Wham, B., Grant, A., Atsushi, M., Anderson, D., Zimmaro, P., **Wang, P.**, Tsai, Y.T., Bachhuber, J., Madugo, C., Sun, J., Hitchcock, C., Motto, M.. (2019). Seismological, Geological, and Geotechnical Engineering Aspects of the 2018 Magnitude 6.6 Hokkaido Eastern Iwate Earthquake. Report No. GEER-060. DOI: 10.18118/G6CM1K.
1. **Wang, P.**, Stewart, J. P., Bozorgina, Y., Boore, D. M., Kishida, T. (2017). "R" Package for Computation of Earthquake Ground Motion Response Spectra. Report No. 2017/09. PEER, UC Berkeley.

## Presentations

### Oral presentation

3. Oral presenter. Seismological Society of America Annual Meeting. 04/19/2021-04/23/2021.
2. Seminar presenter. Institute of Geophysics, China Earthquake Administration. 12/23/2019.
1. Seminar presenter. Institute of Geophysics, China Earthquake Administration. 12/17/2018.

### Poster presentation

2. Poster presenter. Seismological Society of America Annual Meeting. 04/19/2021-04/23/2021.
1. Poster presenter. Earthquake Engineering Research Institute. 03/23/2021-03/25/2021.

## Softwares

3. An R Package for Computation of Earthquake Ground Motion Response Spectra.  
<https://github.com/wltcwpf/RCTC>
2. An R Package for Horizontal-to-Vertical Spectral Ratios processing. DOI: 10.5281/zenodo.4724141.  
<https://github.com/wltcwpf/hvsrProc>
1. A Python Jupyter Notebook for HVSR Database Access and Analysis. DesignSafe-CI. PRJ-3085.  
DOI: 10.17603/ds2-nn2e-wm79.  
<https://doi.org/10.17603/ds2-nn2e-wm79>

Professional Service    Journal reviewer, *Earthquake Spectra*  
Member, *Earthquake Engineering Research Institute*  
Member, *Seismological Society of America*  
Member, *Geotechnical Extreme Event Reconnaissance Association*

Teaching Experience    **Civil Engineering, UCLA**  
TA, Design of Foundations and Earth Structures, Winter 2019-20  
TA, Principles of Soil Mechanics, Fall 2016.

**Statistics, UCLA**  
TA, Introduction to Monte Carlo Methods, Fall 2019.  
Reader, Introduction to Statistics, Summer 2020

Languages and Skills    English (fluent), Chinese (native)  
R, Python, Matlab, MySQL, L<sup>A</sup>T<sub>E</sub>X

Committee	Jonathan P. Stewart (Ph.D. advisor) Civil and Environmental Engineering UCLA <a href="mailto:jstewart@seas.ucla.edu">jstewart@seas.ucla.edu</a> , +1 (310) 206-2990	Frederic (Rick) Paik Schoenberg Statistics UCLA <a href="mailto:frederic@stat.ucla.edu">frederic@stat.ucla.edu</a> , +1 (424) 280-6118
	Scott J. Brandenburg Civil and Environmental Engineering UCLA <a href="mailto:sjbrandenberg@ucla.edu">sjbrandenberg@ucla.edu</a> , +1 (310) 825-9819	Yousef Bozorgnia Civil and Environmental Engineering UCLA <a href="mailto:yousef.bozorgnia@ucla.edu">yousef.bozorgnia@ucla.edu</a> , +1 (310) 825-9254