

TRISTAN E. BUCKREIS

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EDUCATION

- University of California, Los Angeles (UCLA), Ph.D., Civil Engineering* *Dec 2022*
Major Field: Geotechnical Engineering
Minor Field: Structural Engineering
Minor Field: Statistics
- University of California, Los Angeles (UCLA), M.S., Civil Engineering* *Jun 2018*
Major Field: Geotechnical Engineering
- California State University, Long Beach (CSULB), B.S., Civil Engineering (Cum Laude)* *May 2017*
Minor in Applied Mathematics
University Engineering Honors Program (EHP)
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RESEARCH EXPERIENCE

- Postdoctoral Scholar, University of California, Los Angeles* *Jan 2023 – present*
- Mentors: Jonathan P. Stewart, Ph.D., P.E., N.A.E. and Scott J. Brandenburg, Ph.D., P.E.
 - Next Generation Attenuation (NGA)-West3 Project (ongoing): international and multidisciplinary project; develop and manage a global ground-motion database; develop ground motion models (GMMs) for engineering applications
 - Seismic Site Response of the Great Valley in California (ongoing): investigate subregional path effects and site response in California's Great Valley
 - Horizontal-Over-Vertical Spectral Ratio (HVSR) applications in seismic site response (ongoing)
 - San Francisco Bay Area Site Response Project: investigate subregional path effects and regional site response in the San Francisco Bay Area using empirical methods
 - Community Seismic Network (CSN) Project: investigate the usability of ground-motions recorded by the CSN for engineering applications
 - Velocity Profile DataBase (VSPDB) (ongoing): provide maintenance and updates to the VSPDB (<https://www.vspdb.org/>)
 - Ground Motion Relational DataBase (GMDB): develop a relational database and cyber-infrastructure to store and work with ground-motion data and metadata (<https://www.gmdatabase.org/>)
- Graduate Student Researcher, University of California, Los Angeles* *Sep 2018 – Dec 2022*
- Ph.D. Thesis: "Customization of path and site response components of global ground motion models for application in Sacramento-San Joaquin Delta region of California" Committee: Jonathan P. Stewart, Ph.D., P.E., N.A.E. (co-Chair); Scott J. Brandenburg, Ph.D., P.E. (co-Chair); Yousef Bozorgnia, Ph.D., P.E.; and Henry J. Burton, Ph.D., S.E.
 - Delta Site Response Project: investigate subregional anelastic path effects across California and local site response effects in soft, organic soils in the Sacramento-San Joaquin Delta region
 - Ground Motion Relational DataBase (GMDB): develop a relational database and cyber-infrastructure to store and work with ground-motion data and metadata (<https://www.gmdatabase.org/>)

- Horizontal-Over-Vertical Microtremor Testing and Analyses: perform field measurements and investigate the applications in site response
- Velocity Profile DataBase (VSPDB) (ongoing): prepare data for integration, provide maintenance and updates to the VSPDB (<https://www.vspdb.org/>)
- Mentor, Southern California Earthquake Center (SCEC) Supported Opportunities for Undergraduate and Research to Collaborate on Earthquake Science (SOURCES), Summer 2022
- Mentor, Natural Hazards Engineering Research Infrastructure (NHERI) Research Experience for Undergraduates (REU), Summer 2021

Undergraduate Student Researcher, California State University, Long Beach *Aug 2015 – May 2017*

- Honors Thesis: “Numerical evaluation of laterally loaded rock-socketed deep foundations” Mentor: Lisa M. Star, Ph.D., P.E.

TEACHING EXPERIENCE

Guest Lecture, UCLA CEE 225: Geotechnical Earthquake Engineering - DEEPSOIL	<i>Apr 16, 2025</i>
Stand-In Lecture, UCLA CEE 220: Advanced Soil Mechanics	<i>Sep 30, 2024</i>
Guest Lecture, UCLA CEE 225: Geotechnical Earthquake Engineering - DEEPSOIL	<i>Apr 13, 2023</i>
Stand-In Lecture, UCLA CEE 121: Design of Foundations and Earth Structures	<i>Feb 9, 2023</i>
Guest Lecture, UCLA CEE 225: Geotechnical Earthquake Engineering - DEEPSOIL	<i>Apr 7, 2022</i>
Teaching Assistant, UCLA CEE 121: Design of Foundations and Earth Structures	<i>Winter 2022</i>
Teaching Assistant, UCLA CEE 225: Geotechnical Earthquake Engineering	<i>Spring 2020</i>
Instructional Support Assistant, CSULB: Engineering Student Success Center	<i>Feb 2016 – May 2017</i>

RECONNAISSANCE EXPERIENCE

2023 Kahramanmaraş, Türkiye Earthquake Sequence

- Assembled ground-motion data and provided remote assistance to field teams

2019 Ridgecrest, California Earthquake Sequence

- UAV imaging of surface fault rupture with UW RAPID facility

AWARDS AND HONORS

Outstanding Student Paper, Association of State Dam Safety Officials (ASDSO)	<i>2019</i>
UCLA “Dirty” Bruin Award, Cal Geo Student Chapter (outstanding 1 st year graduate student)	<i>2018</i>
Los Angeles Geo-Institute Chapter Scholarship, ASCE	<i>2017</i>
Los Angeles Civil Engineering Land Survey Scholarship	<i>2015, 2016</i>
CSULB President’s Honor List (term GPA ≥ 3.75)	<i>Fall 2013, 2015; Spring 2014, 2016, 2017</i>
CSULB Dean’s Honor List ($3.50 \leq$ term GPA < 3.75)	<i>Fall 2014, 2016; Spring 2015</i>

PROFESSIONAL AFFILIATIONS

- Member, *American Society of Civil Engineers (ASCE)*
- Member, *Earthquake Engineering Research Institute (EERI)*
- Member, *Geotechnical Extreme Events Reconnaissance (GEER)*
- Member, *Seismological Society of America (SSA)*

PEER-REVIEW SERVICE

Journal reviewer, *Bulletin of Earthquake Engineering*

Journal reviewer, *Earthquake Spectra*

Journal reviewer, *Journal of Applied Geophysics*

Reviewer, 13th National Conference on Earthquake Engineering (13NCEE)

Reviewer, 8th International Conference on Earthquake Geotechnical Engineering (8ICEGE)

PUBLICATIONS

Journal Articles

10. **Buckreis, TE**, CC Nweke, P Wang, SJ Brandenburg, ME Ramos-Sepúlveda, R Shams, S Mohammed, R Pretell, S Mazzoni, P Zimmaro, and JP Stewart (2025) A global application programming interface-enabled earthquake ground motion relational database for engineering applications, *Earthquake Spectra*, 41(5): 4162-4194. <https://doi.org/10.1177/87552930251344978>
 9. Ramos-Sepúlveda, ME, SJ Brandenburg, **TE Buckreis**, GA Parker, and JP Stewart (2025) High-pass corner frequency selection and review tool for use in ground-motion processing, *Seismological Research Letters*, 96(5): 3244-3252. <https://doi.org/10.1785/0220240265>
 8. **Buckreis, TE**, P Wang, JP Stewart, SJ Brandenburg, and MW Driller (2025) Analysis of near-surface shear wave velocity data for site response applications in the Sacramento-San Joaquin Delta Region of California, *Environmental & Engineering Geoscience*, 31(3): 177-192. <https://doi.org/10.21663/EEG-D-24-00032>
 7. Moss, RES, E Altunel, P Bassal, JB Bray, **T Buckreis**, OK Cetin, K Clahan, E Duman, D Frost, Y Hashash, RD Koehler, O Kozaci, JM Lozano, J Macedo, D Moug, E Nichols, M Pehlivan, R Pretell, JP Stewart, K Ulmer, and C Yildirim (2024) Geotechnical and geological reconnaissance observations of the February 6th 2023 Türkiye Earthquakes, *Earthquake Spectra* 41(1): 219-248. <https://doi.org/10.1177/87552930241281007>
 6. Mohammed, S, R Shams, CC Nweke, **TE Buckreis**, MD Kohler, Y Bozorgnia, and JP Stewart (2024) Usability of Community Seismic Network recordings for ground motion modeling, *Earthquake Spectra* 40(4): 2598-2622. <https://doi.org/10.1177/87552930241267749>
 5. **Buckreis, TE**, R. Pretell, MA Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, and JP Stewart (2024) Engineering attributes of ground motions from February 2023 Türkiye earthquake sequence, *Earthquake Spectra* 40(4): 2268-2284. <https://doi.org/10.1177/87552930241259024>
 4. **Buckreis, TE**, JP Stewart, SJ Brandenburg, and P Wang (2024) Small-strain site response of soft soils in the Sacramento-San Joaquin Delta region of California conditioned on V_{s30} and mHVSr, *Earthquake Spectra* 40(1): 230-260. <https://doi.org/10.1177/87552930231217165>
 3. **Buckreis, TE**, JP Stewart, SJ Brandenburg, and P Wang (2023) Subregional anelastic attenuation model for California, *Bulletin of the Seismological Society of America* 113(6): 2292-2310. <https://doi.org/10.1785/0120220173>
 2. Wang, P, P Zimmaro, **TE Buckreis**, T Gospe, SJ Brandenburg, SK Ahdi, A Yong, JP Stewart (2022). Relational database for Horizontal-to-Vertical Spectral Ratios, *Seismological Research Letters* 93(2A): 1075-1088. <https://doi.org/10.1785/0220210128>
 1. Brandenburg, SJ, JP Stewart, P Wang, CC Nweke, K Hudson, CA Goulet, X Meng, CA Davis, SK Ahdi, MB Hudson, A Donnellan, G Lyzenga, M Pierce, J Wang, MA Winters, MP Delisle, J Lucey, Y Kim, TW Gallien, A Lyda, JS Yeung, O Issa, **T Buckreis**, Z Yi (2020). Ground Deformation Data from GEER Investigations of Ridgecrest Earthquake Sequence, *Seismological Research Letters* 91(4): 2024-2034. <https://doi.org/10.1785/0220190291>
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Conference Papers

23. **Buckreis, TE**, GM Atkinson, DM Boore, GA Parker, and JP Stewart (2026, accepted) Evolution of the BSSA14 GMM for the NGA-West3 project, *13th National Conference on Earthquake Engineering*, Portland, OR, July 13 - 17, 2026.
22. **Buckreis, TE**, JP Stewart, Y Bozorgnia, JL Donahue, NA Abrahamson, L Al Atik, SH Anamangandan, TD Ancheta, D Asimaki, M Bahrapouri, L Baise, BA Bradley, SJ Branenberg, SB-J Chiou, RB Darragh, K Francis, RW Graves, J-Y Huang, T Kishida, AR Kottke, G Lanzano, G Iavrentiadis, RL Lee, M Li, L Luzi, S Midorikawa, S Mohammed, N Morikawa, S Nie, CC Nweke, CA Pajaro, CI Pinilla-Ramos, A Rampersad, JN Ridden, R Shams, H Si, KC-H Sung, P Zimmaro, and C Zhu (2026, accepted) Summary of the NGA-West3 project database, *13th National Conference on Earthquake Engineering*, Portland, OR, July 13 - 17, 2026.
21. Ornelas, FJ, **TE Buckreis**, SJ Brandenburg, and JP Stewart (2026, accepted) Collection of ambient noise data across California to derive horizontal-to-vertical spectral ratios (HVSr), *13th National Conference on Earthquake Engineering*, Portland, OR, July 13 - 17, 2026.
20. Parker, GA, GM Atkinson, A Baltay, DM Boore, **TE Buckreis**, and JP Stewart (2026, accepted) The high-frequency attenuation parameter in NGA-West3 EAS: modeling with varying levels of complexity, *13th National Conference on Earthquake Engineering*, Portland, OR, July 13 - 17, 2026.
19. Sahin, A, RE Moss, KO Cetin, SJ Brandenburg, JP Stewart, and **TE Buckreis** (2026) Site characterization for selected liquefaction case history sites from February 6, 2023, Türkiye-Kahramanmaraş earthquakes, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in an Environment of Change*, Salt Lake City, Utah, March 9 - 12, 2026, Geotechnical Special Publication No. 375, J Montgomery and BR Cox (Eds.), 427-438, ASCE Geo-Institute. <https://escholarship.org/uc/item/6nw4g27b>
18. Choi, J, JP Stewart, **TE Buckreis**, and SJ Brandenburg (2026) Proxy-based V_{S30} estimation for Utah conditioned on surface geology and surface gradient, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in an Environment of Change*, Salt Lake City, UT, March 9 - 12, 2026, Geotechnical Special Publication No. 375, J Montgomery and BR Cox (Eds.), 355-364, ASCE Geo-Institute. <https://doi.org/10.1061/9780784486702.035>
17. Ornelas, FJ, C de la Torre, **TE Buckreis**, CC Nweke, J Coe, SJ Brandenburg, JP Stewart, J Stapleton, and Z Zhang (2026) Site response estimation through artificial neural networks incorporating microtremor-based horizontal-to-vertical spectral ratio, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in an Environment of Change*, Salt Lake City, UT, March 9 - 12, 2026, Geotechnical Special Publication No. 375, J Montgomery and BR Cox (Eds.), 522-531, ASCE Geo-Institute. <https://doi.org/10.1061/9780784486504.025>
16. **Buckreis, T**, R Shams, S Mohammed, M Li, T Kishida, G Lanzano, L Luzi, P. Zimmaro, J-Y Huang, M Bahrapouri, CP Miranda, B Bradley, C Nweke, S Brandenburg, J Donahue, Y Bozorgnia, and J Stewart (2025) Regional datasets included in the NGA-West3 ground-motion database, *Geo-Extreme 2025: Geotechnical Engineering for Extreme Events*, Long Beach, CA, November 2 - 5, 2025. <https://doi.org/10.1061/9780784486504.028>
15. Mohammed, S, R Shams, **T Buckreis**, C Nweke, S Brandenburg, and J Stewart (2025) Sub-regional site response for the San Francisco Bay Area, *Geo-Extreme 2025: Geotechnical Engineering for Extreme Events*, Long Beach, CA, November 2 - 5, 2025. <https://doi.org/10.1061/9780784486504.027>
14. Shams, R, **T Buckreis**, C Nweke, S Brandenburg, and J Stewart (2025) Extrapolation algorithm for computing $z_{1.0}$ from shallow measured velocity profile, *Geo-Extreme 2025: Geotechnical Engineering for Extreme Events*, Long Beach, CA, November 2 - 5, 2025. <https://doi.org/10.1061/9780784486504.024>
13. Ornelas, FJ, **T Buckreis**, C Nweke, S Brandenburg, and J Stewart (2025) Identification of site response features using microtremor HVSr, *Geo-Extreme 2025: Geotechnical Engineering for Extreme Events*, Long Beach, CA, November 2 - 5, 2025. <https://doi.org/10.1061/9780784486504.025>
12. Ornelas, FJ, CA de la Torre, **TE Buckreis**, CC Nweke, SJ Brandenburg, and JP Stewart (2025) Preliminary ergodic site response model for California conditioned on mHVSr, *Proc. SMIP2025 Seminar on Utilization of Strong Motion Data*, California Strong Motion Instrumentation Program, Online Seminar, October 9, 2025. <https://escholarship.org/uc/item/1ht67955>

11. **Buckreis, TE**, CC Nweke, P Wang, SJ Brandenburg, R Shams, ME Ramos-Sepúlveda, R Pretell, S Mazzoni, and JP Stewart (2024) User-interaction with a web-served global ground motion relational database, *18th World Conference on Earthquake Engineering (WCEE2024)*, Milan, Italy, June 30 - July 5, 2024. <https://escholarship.org/uc/item/9tw6k14c>
10. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2024) A general framework for modeling subregional path effects, *18th World Conference on Earthquake Engineering (WCEE2024)*, Milan, Italy, June 30 - July 5, 2024. <https://escholarship.org/uc/item/7c5870pf>
9. **Buckreis, TE**, R Pretell, MA Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, and JP Stewart (2024) February 6, 2023 Türkiye Earthquakes: Ground Motions, *8th International Conference on Earthquake Geotechnical Engineering (8ICEGE)*, Osaka, Japan, May 7 - May 10, 2024. <https://doi.org/10.3208/jgssp.v10.SS-6-04>
8. Ornelas, F-JG, **TE Buckreis**, CC Nweke, P Wang, C de la Torre, SJ Brandenburg, and JP Stewart (2024) Preliminary ergodic site response model for California conditioned on V_{S30} and HVSR parameters, *8th International Conference on Earthquake Geotechnical Engineering (8ICEGE)*, Osaka, Japan, May 7 - May 10, 2024. <https://doi.org/10.3208/jgssp.v10.OS-36-06>
7. Stewart, JP, SA Mohammad, CC Nweke, R Shams, **TE Buckreis**, MD Kohler, and Y Bozorgnia (2023) Comparison of ground motions from CSN instruments and proximate sensors from other networks, *Proc. SMIP2023 Seminar on Utilization of Strong Motion Data*, California Strong Motion Instrumentation Program, Online Seminar, October 19, 2023. <https://escholarship.org/uc/item/72p42461>
6. **Buckreis, TE**, P Wang, SJ Brandenburg, S Friesen, JP Stewart (2023). Site characterization data for site response modeling in Sacramento-San Joaquin Delta Region of California, *Geo-Congress 2023: Geotechnics of Natural Hazards*, Los Angeles, CA, March 2023, Geotechnical Special Publication No. 338, EM Rathje, B Montoya, and MH Wayne (Eds.), 187-196, ASCE Geo-Institute. <https://doi.org/10.1061/9780784484654.020>
5. **Buckreis, TE**, CC Nweke, P Wang, SJ Brandenburg, S Mazzoni, and JP Stewart (2023). Relational database for California strong ground motions, *Geo-Congress 2023: Geotechnical Data Analysis and Computation*, Los Angeles, CA, March 2023, Geotechnical Special Publication No. 342, EM Rathje, B Montoya, and MH Wayne (Eds.), 461-470, ASCE Geo-Institute. <https://doi.org/10.1061/9780784484692.047>
4. Wang, P, **TE Buckreis**, SJ Brandenburg, JP Stewart (2023). Modified hyperbolic model for dynamic properties of peaty organic soils, *Geo-Congress 2023: Geotechnical Characterization*, Los Angeles, CA, March 2023, Geotechnical Special Publication No. 340, EM Rathje, B Montoya, and MH Wayne (Eds.), 273-282, ASCE Geo-Institute. <https://doi.org/10.1061/9780784484678.028>
3. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2022). Seismic ground motion prediction for Delta Region of California including regional path effects and local site response, *12th National Conference on Earthquake Engineering*, EERI, Salt Lake City, UT, Jun 27 - Jul 1, 2022. <https://escholarship.org/uc/item/2zv480zc>
2. Gospe, T, P Zimmaro, P Wang, **TE Buckreis**, SK Ahdi, AK Yong, SJ Brandenburg and JP Stewart (2020) Supplementing shear wave velocity profile database with microtremor-based H/V spectral ratios. *17th World Conference on Earthquake Engineering*, (Paper No. C003010) <https://escholarship.org/uc/item/49g807wz>
1. **Buckreis, TE**, SJ Brandenburg, and JP Stewart (2019). Regional semi-empirical site response model for Sacramento-San Joaquin Delta levees. *ASDSO Dam Safety*, Orlando, FL, Sep 8-12, 2019. <https://learningcenter.damsafety.org/products/2019-dam-safety-conference-proceedings>

Major Reports

5. **Buckreis, TE** and JP Stewart (Editors) (2025) Data resources for NGA-West3 Project, *Report GIRS-2025-07*, B. John Garrick Risk Institute, Natural Hazards Risk and Resiliency Research Center, Y Bozorgnia (NGA-West3 PI), UCLA (Center Headquarters), 418 pages. <https://doi.org/10.34948/N3D30R>
4. Stewart, JP, S Mohammed, **TE Buckreis**, SJ Brandenburg, CC Nweke, and R Shams (2025) Sub-regional site response of San Francisco Bay Area, *Report GIRS-2025-06*, B. John Garrick Risk Institute, Natural

- Hazards Risk and Resiliency Research Center, UCLA (Center Headquarters), 144 pages. <http://doi.org/10.34948/N3HS3Q>
3. Kishida, T, S Muin, S Derakhshan, SK Ahdi, JP Stewart, **T Buckreis**, S Mazzoni, Y Bozorgnia, RB Darragh, WJ Silva, and E Farzanegan (2025) Processing earthquake ground-motions recorded in Iran from 1973 to 2013, *Report GIRS-2025-05*, B. John Garrick Risk Institute, Natural Hazards Risk and Resiliency Research Center, UCLA (Center Headquarters), 151 pages. <https://doi.org/10.34948/N3NK5N>
 2. Stewart, JP, S Mohammad, CC Nweke, R Shams, **TE Buckreis**, MD Kohler, and Y Bozorgnia (2023) Usability of ground motions recorded by community seismic network, *Report GIRS-2023-08*, B. John Garrick Risk Institute, Natural Hazards Risk and Resiliency Research Center, UCLA (Center Headquarters), 63 pages. <https://doi.org/10.34948/N36K5M>
 1. **Buckreis, TE**, B Güryuva, A İçen, O Okçu, A Altindal, MF Aydin, R Pretell, A Sandikkaya, Ö Kale, A. Askan, S.J. Brandenburg, T. Kishida, S. Akkar, Ö. Cetin, Y. Bozorgnia, and J.P. Stewart (2023) "Chapter 3: Ground Motions," in *February 6, 2023 Türkiye: Report on Geoscience and Engineering Impacts*, Report GEER-082, GEER Association, 382 pages. <https://doi.org/10.18118/G6PM34>
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Curated Datasets

23. Ulmer, K, S Brandenburg, **T Buckreis**, K Hudson, and J Stewart (2026) NGL, GMDB, and VsPDB Database Exploration Workshop, DesignSafe-CI. <https://doi.org/10.17603/ds2-dbm2-rc43>
22. Ornelas, F, **T Buckreis**, S Brandenburg, and J Stewart (2025) Microtremor measurements collected from permanent stations in and around California and Nevada between 2000 and 2025, in *Microtremor Horizontal-to-Vertical Spectral Ratios (mHVSr) from Permanently Installed Broadband Seismometers*, DesignSafe-CI. <https://doi.org/10.17603/ds2-4ehv-c597>
21. Ornelas, F, J Stapleton, **T Buckreis**, C Nweke, and J Stewart (2025) Microtremor data collection in the West LA Region, 2024, in *Microtremor measurements performed in proximity to strong-motion stations across California*, DesignSafe-CI. <https://doi.org/10.17603/ds2-kz21-za86>
20. Ornelas, F, J Stapleton, **T Buckreis**, C Nweke, and J Stewart (2025) Microtremor data collection in the San Fernando Valley Basin, 2024, in *Microtremor measurements performed in proximity to strong-motion stations across California*, DesignSafe-CI. <https://doi.org/10.17603/ds2-yxm7-2p26>
19. Ornelas, F, J Stapleton, **T Buckreis**, C Nweke, and J Stewart (2025) Microtremor data collection in the Imperial Valley Basin, 2024, in *Microtremor measurements performed in proximity to strong-motion stations across California*, DesignSafe-CI. <https://doi.org/10.17603/ds2-6wpb-0r31>
18. **Buckreis, T**, C Nweke, P Wang, S Brandenburg, M Ramos-Sepúlveda, R Shams, S Mohammed, R Pretell, S Mazzoni, P Zimmaro, and J Stewart (2025) Archive of an earthquake ground motion relational database (GMDB) for engineering applications, DesignSafe-CI. <https://doi.org/10.17603/ds2-w0zm-y670>
17. Mohammed, S, **T Buckreis**, R Shams, C Nweke, S Brandenburg, and J Stewart (2025) Data files for San Francisco Bay Area (SFBA) ground motion study, DesignSafe-CI. <https://doi.org/10.17603/ds2-877y-cc73>
16. Wang, P, S Brandenburg, **T Buckreis**, and J Stewart (2024) A database of 1D nonlinear ground response simulations in the Sacramento-San Joaquin Delta region of California, in *Nonlinear site response of soft soil sites in the Sacramento-San Joaquin Delta region of California*. DesignSafe-CI. <https://doi.org/10.17603/ds2-re6v-3a84>
15. **Buckreis, T**, P Wang, J Stewart, S Brandenburg, and M Driller (2024) Compilation of Shear-Wave Velocity Measurements in the Sacramento-San Joaquin Delta Region of California, DesignSafe-CI. <https://doi.org/10.17603/ds2-7n84-t542>
14. Mohammed, S, R Shams, **T Buckreis**, C Nweke, M Kohler, Y Bozorgnia, and J Stewart (2024) Data Files for Community Seismic Network (CSN) Ground Motion Study. DesignSafe-CI. <https://doi.org/10.17603/ds2-3e79-4e07>
13. Nweke, C, **T Buckreis**, F Ornelas, R Shams, P Vyas, and SK C (2024) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSr) Data Collection at Brentwood, 2022, in *Microtremor Measurements Performed Within Southern California*. DesignSafe-CI. <https://doi.org/10.17603/ds2-d56j-h615>

12. Nweke, C, **T Buckreis**, F Ornelas, R Shams, P Vyas, and SK C (2024) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Data Collection at Tarzana, 2022, in *Microtremor Measurements Performed Within Southern California*. DesignSafe-CI. <https://doi.org/10.17603/ds2-ser9-8521>
11. Pretell, R, **T Buckreis**, S Brandenburg, and J Stewart (2024) Spatial correlation models for ground motion intensity measures of the 2023 Türkiye-Syria Earthquakes. DesignSafe-CI. <https://doi.org/10.17603/ds2-27yr-5m86>
10. Ornelas, F, C de la Torre, C Nweke, **T Buckreis**, P Wang, S Brandenburg, and J Stewart (2023) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Data Collection at California Downhole Vertical Array Sites, 2022, in *Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Site Characterization of California Vertical Arrays*. DesignSafe-CI. <https://doi.org/10.17603/ds2-by4m-ed67>
9. Ramos-Sepulveda, M, **T Buckreis**, M Li, G Parker, S Brandenburg, E Rathje, and J Stewart (2023) 2023 NGA-Compatible CENA Database for GMM Validation and Site Response Studies. DesignSafe-CI. <https://doi.org/10.17603/ds2-ywqs-sp29>
8. **Buckreis, T**, B Güryuva, A İçen, O Okcu, A Altindal, M Aydın, R Pretell, A Sandikkaya, O Kale, A Askan, S Brandenburg, T Kishida, S Akkar, Y Bozorgnia, and J Stewart (2023) Ground Motion Data from the 2023 Türkiye-Syria Earthquake Sequence. DesignSafe-CI. <https://doi.org/10.17603/ds2-t115-bk16>
7. Kottke, A, B Kim, **T Buckreis**, F Dai, J Xing, K Jeon, Y Hashash, and J Stewart (2022) Shear wave velocity datafiles for sites in central and eastern North America as compiled by the Geotechnical Working Group as part of the NGA-East project. DesignSafe-CI. <https://doi.org/10.17603/ds2-evrj-6992>
6. **Buckreis, TE**, JP Stewart, SJ Brandenburg, P Wang, and CC Nweke (2022) Data Files for California Subregional Path Effect Study. DesignSafe-CI. <https://doi.org/10.17603/ds2-mbee-8941>
5. Nweke, CC, JP Stewart, P Wang, SJ Brandenburg, and **T Buckreis** (2022) Data Files for Ground Motion Studies Pertaining to Southern California Basins and Other Geomorphic Provinces. DesignSafe-CI. <https://doi.org/10.17603/ds2-93rk-hz83>
4. **Buckreis, T**, A Winders, P Wang, SJ Brandenburg and JP Stewart (2021) Microtremor Data Collected in Sacramento-San Joaquin Delta Region of California. DesignSafe-CI. <https://doi.org/10.17603/ds2-dk6t-8610>
3. Rathje, E, A Mathews, SJ Brandenburg, **T Buckreis**, and K Hudson (2021) Interpolating ground motion intensity at sites in the Next Generation Liquefaction database. DesignSafe-CI. <https://doi.org/10.17603/ds2-ab8v-z026>
2. Buenker, JM, SJ Brandenburg, MM Eslami, D Abundis, **T Buckreis**, and JP Stewart (2020) Centrifuge Test on Bentonite Clay - Test UCLA JZB01. DesignSafe-CI. <https://doi.org/10.17603/ds2-e7s5-b025>
1. Lyda, A, J Yeung, J, **T Buckreis**, O Issa, SJ Brandenburg, and Z Yi (2019) “UW RAPID UAV Imaging”, in *Ridgecrest, CA earthquake sequence, July 4 and 5, 2019*. DesignSafe-CI. <https://doi.org/10.17603/ds2-tyca-se83>

PRESENTATIONS

Invited Seminars

5. **Buckreis, TE** (2026) Earthquake ground-motion characterization: From global shaking to Hawaiian quakes, *Department of Civil, Environmental, and Construction Engineering Seminar*, University of Hawai‘i at Mānoa, Honolulu, HI, February 26, 2026.
4. **Buckreis, TE** (2023) NGA-West3 Database Project: Ground Motion Database, *COSMOS Event for Early Career Professionals and Students*, University of Southern California, Los Angeles, CA, November 3, 2024.
3. **Buckreis, TE** (2023) Future Impacts of Ground Motions from the February 2023 Türkiye Earthquake Sequence, *5th Kenji Ishihara Colloquium Series on Earthquake Engineering: Advancing Earthquake Engineering and Functional Recovery in the Wake of the Turkey Earthquake*, EERI San Diego Regional Chapter, October 5, 2023. (remote).
2. **Buckreis, TE**, B Güryuva, A İçen, O Okçu, A Altindal, M Aydın, R Pretell, A Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, T Kishida, S Akkar, Ö Cetin, Y Bozorgnia, and JP Stewart (2023) February 6, 2023 Kahramanmaraş Earthquake Sequence: Ground Motions, *EERI Learning From Earthquakes*:

Kahramanmaraş Earthquakes Reconnaissance Webinar Series: Geotechnical Impacts (with GEER), May 30, 2023. (remote).

1. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2022) Subregional anelastic path effects in California, *USGS Earthquake Science Seminars*, November 30, 2022. (remote).
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Oral Presentations

16. **Buckreis, TE** (2026) Overview of GMDB and VSPDB, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in Environment of Change*, ASCE Geo-Institute, Salt Lake City, Utah, March 9 - 12, 2026.
15. **Buckreis, TE** (2026) NGA-West3 update on ground-motion models and ground-motion database development, *2025 COSMOS Technical Session and Annual Meeting*, Oakland, CA, February 18-19, 2026.
14. **Buckreis, TE**, R Shams, S Mohammed, M Li, T Kishida, G Lanzano, L Luzi, P Zimmaro, J-Y Huang, M Bahrapouri, CP Miranda, B Bradley, C Nweke, S Brandenburg, J Donahue, Y Bozorgnia, and J Stewart (2025) Regional datasets included in the NGA-West3 ground-motion database, *Geo-Extreme 2025: Geotechnical Engineering for Extreme Events*, Long Beach CA, November 2-5, 2025.
13. **Buckreis, TE**, CC Nweke, P Wang, SJ Brandenburg, R Shams, ME Ramos-Sepulveda, R Pretell, S Mazzoni, and JP Stewart (2024) User-interaction with a web-served global ground motion relational database, *18th World Conference on Earthquake Engineering (WCEE2024)*, Milan, Italy, June 30 - July 5, 2024.
12. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2024) A general framework for modeling subregional path effects, *18th World Conference on Earthquake Engineering (WCEE2024)*, Milan, Italy, June 30 - July 5, 2024.
11. **Buckreis, TE**, R Pretell, MA Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, and JP Stewart (2024) February 6, 2023 Türkiye Earthquakes: Ground Motions, *8th International Conference on Earthquake Geotechnical Engineering (8ICEGE)*, Osaka, Japan, May 7-10, 2024.
10. **Buckreis, TE**, R Pretell, MA Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, and JP Stewart (2024) Engineering Attributes of Ground Motions from February 2023 Türkiye Earthquake Sequence, *2024 EERI Annual Meeting*, Seattle, WA, April 9-12, 2024.
9. **Buckreis, TE**, R Pretell, M. Sandikkaya, Ö Kale, A Askan, SJ Brandenburg, and JP Stewart (2024) Engineering Attributes of Ground Motions from February 2023 Türkiye Earthquake Sequence, *International Conference Commemorating the 2023 Kahramanmaraş-Türkiye Earthquakes*, Gölbaşı, Türkiye, February 6, 2024. (remote)
8. **Buckreis, TE** (2023) 2023 Turkey earthquake sequence: Strong motion data, *Proc. SMIP2023 Seminar on Utilization of Strong Motion Data*, California Strong Motion Instrumentation Program, October 19, 2023. (remote).
7. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart. (2023). Using microtremor-based horizontal-to-vertical spectral ratios to improve linear site response predictions in the Sacramento-San Joaquin Delta region of California. *SSA 2022 Annual Meeting*, San Juan, Puerto Rico, April 17-20, 2023.
6. **Buckreis, TE**, CC Nweke, P Wang, SJ Brandenburg, S Mazzoni, and JP Stewart (2023). Relational database for California strong ground motions. *ASCE Geo-Congress 2023*, Los Angeles, CA, March 26-29, 2023.
5. **Buckreis, TE**, P Wang, SJ Brandenburg, S Friesen, and JP Stewart (2023). Site characterization data for site response modeling in Sacramento-San Joaquin Delta Region of California. *ASCE Geo-Congress 2023*, Los Angeles, CA, March 26-29, 2023.
4. **Buckreis, TE**. (2023). Subregional anelastic attenuation model for northern California. *SF_CVM Workshop 2023*, Southern California Earthquake Center (SCEC) short course, Feb. 14, 2023.
3. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2022). Seismic ground motion prediction for Delta Region of California including regional path effects and local site response, *12th National Conference on Earthquake Engineering*, EERI, Salt Lake City, UT, Jun 27 - Jul 1, 2022.
2. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2022). Linear site response of soft peaty organic soil sites in California's Bay-Delta region. *SSA 2022 Annual Meeting*, Bellevue, WA, April 19-23, 2022.
1. **Buckreis, TE**, SJ Brandenburg, and JP Stewart (2021). Regional path effects for ground motion analysis in Sacramento-San Joaquin River Delta, California. *SSA 2021 Annual Meeting*, April 19-23, 2021.

Poster Presentations

14. Choi, J, JP Stewart, **TE Buckreis**, and SJ Brandenburg (2026) Proxy-based V_{S30} estimation for Utah conditioned on surface geology and surface gradient, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in an Environment of Change*, Salt Lake City, Utah, March 9 - 12, 2026, Geotechnical Special Publication No. 375, J Montgomery and BR Cox (Eds.), 355-364, ASCE Geo-Institute.
13. Ornelas, FJ, C de la Torre, **TE Buckreis**, CC Nweke, J Coe, SJ Brandenburg, JP Stewart, J Stapleton, and Z Zhang (2026) Site response estimation through artificial neural networks incorporating microtremor-based horizontal-to-vertical spectral ratio, *Geo-Congress 2026: Geo Tools, Technologies, and Techniques in an Environment of Change*, Salt Lake City, Utah, March 9 - 12, 2026, Geotechnical Special Publication No. 375, J Montgomery and BR Cox (Eds.), 522-531, ASCE Geo-Institute.
12. **Buckreis, TE**, R Shams, CC Nweke, SJ Brandenburg, and JP Stewart (2025) Continuous maps of $z_{1.0}$ and $z_{2.5}$ for California from integrated data sources to support site response modeling, *2025 SCEC Annual Meeting*, Palm Springs, CA, September 7-10, 2025. <https://central.scec.org/publication/14859>
11. Ornelas, FG, CA de la Torre, **TE Buckreis**, CC Nweke, SJ Brandenburg, and JP Stewart (2025) Application of data-driven approaches for estimation of site response utilizing mHVSr and soil-based proxies in California, *2025 SCEC Annual Meeting*, Palm Springs, CA, September 7-10, 2025. <https://central.scec.org/publication/14767>
10. Shams, R, CC Nweke, **TE Buckreis**, SJ Brandenburg, and JP Stewart (2025) Improving iso-surface depth ($z_{1.0}$) estimates for California sites from measured profiles and geology-based proxy models for ground motion studies, *2025 SCEC Annual Meeting*, Palm Springs, CA, September 7-10, 2025. <https://central.scec.org/publication/14252>
9. Parker, GA, GM Atkinson, AS Baltay, DM Boore, **TE Buckreis**, and JP Stewart (2025) Preliminary empirical models for effective amplitude spectra based on the NGA-West3 dataset, *2025 SCEC Annual Meeting*, Palm Springs, CA, September 7-10, 2025.
8. **Buckreis, TE**, R Shams, S Mohammed, M Li, T Kishida, G Lanzano, L Luzi, P Zimmaro, BA Bradley, JY Huang, CC Nweke, SJ Brandenburg, JL Donahue, Y Bozorgnia, and JP Stewart (2024) Overview of the NGA-West3 ground motion database, *2024 SCEC Annual Meeting*, Palm Springs, CA, September 7-11, 2024. <https://central.scec.org/publication/13977>
7. **Buckreis, TE**, BS Chiou, RB Darragh, RW Graves, and JP Stewart (2024) Earthquake-source parameters: Are they what you think they are? *2024 SCEC Annual Meeting*, Palm Springs, CA, September 7-11, 2024. <https://central.scec.org/publication/13828>
6. Shams, R, SK C, **TE Buckreis**, SJ Brandenburg, JP Stewart, and CC Nweke (2024) Application for CVMs for NGA-West3 Project, *2024 SCEC Annual Meeting*, Palm Springs, CA, September 7-11, 2024. <https://central.scec.org/publication/13836>
5. Parker, GA, AS Baltay, GM Atkinson, DM Boore, **TE Buckreis**, and JP Stewart (2024) A new near-source saturation model for EAS based on the NGA-West3 database, *2024 SCEC Annual Meeting*, Palm Springs, CA, September 7-11, 2024.
4. Pretell, R, **TE Buckreis**, SJ Brandenburg, and JP Stewart (2023) A Bayesian approach for developing ground motion spatial correlation models, *2023 SCEC Annual Meeting*, Palm Springs, CA, September 10-12, 2023. <https://www.scec.org/meetings/2023/am/poster/174>
3. **Buckreis, TE**, P Wang, SJ Brandenburg, and JP Stewart (2022). Linear site response model applicable to levees in Sacramento-San Joaquin Delta Region of California. *ASCE Lifelines Conference*, Jan 31 – Feb 11, 2022. https://www.uclageo.com/posters/Buckreis_etal_Lifelines_2022_Linear_Site_Response.php
2. Gospe, T, P Zimmaro, SK Ahdi, A Yong, P Wang, **T Buckreis**, S Brandenburg, and JP Stewart (2021) Supplementing shear wave velocity profile database with microtremor-based H/V spectral ratios, *17th World Conference on Earthquake Engineering*, Sendai, Japan, September 27 - October 2, 2021. <https://peer.berkeley.edu/sites/default/files/postergospepeer.pdf>
1. **Buckreis, TE**, SJ Brandenburg, and JP Stewart (2019). Regional semi-empirical site response model for Sacramento-San Joaquin Delta levees. *ASDSO Dam Safety*, Orlando, FL, Sep 8-12, 2019.