



# **CHUKWUEBUKA C. NWEKE, Ph.D., E.I.T**

*Assistant Professor*

University of Southern California

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## **RESEARCH INTERESTS**

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Site-specific and region-specific ground motion site effects modeling (sedimentary basins and non-basins), evaluation and application of physics-based earthquake simulation, non-invasive site characterization, determining the dynamic material properties of bio-cemented soils, earthquake effects on lifeline infrastructure systems, innovative hazard reconnaissance methods, cloud-based computation and data management for hazard preparation, and pre- and post-assessment.

## **EDUCATION**

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- Ph.D. University of California, Berkeley**  
Civil and Environmental Engineering (Geotechnical) 2017  
Dissertation - *Constitutive Modeling of Weakly Cemented Sands*  
Dr. Nicholas Sitar (Chair/Advisor)  
Dr. Juan Pestana (Advisor)  
Minors: Geomorphology, Numerical Analysis/Finite Element Modeling
- M.S. University of California, Berkeley**  
Civil and Environmental Engineering (Geotechnical) 2013
- B.S. University of California, Davis**  
Civil and Environmental Engineering 2012

## **CERTIFICATIONS**

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**Engineer-In-Training (EIT)**, State of California (Certificate No. *EIT 144450*)

**Professional Engineer (PE)** – In progress (to be acquired by November 2025)

## **EXPERIENCE**

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**Assistant Professor**, University of Southern California, Sonny Astani Department of Civil and Environmental Engineering (August 2021 – present)

**Staff Engineer**, ENGEO Incorporated (August 2020 – April 2021)

**Postdoctoral Research Fellow**, Department of Civil and Environmental Engineering, University of California at Los Angeles (October 2017 – July 2020)

**Graduate Student Researcher/Instructor**, Department of Civil and Environmental Engineering, University of California at Berkeley (August 2012 – August 2017)

## **RESEARCH FUNDING** (*Total Funding @ USC: \$183,448*)

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**University of Southern California**, Sonny Astani Department of Civil and Environmental Engineering

***Frequency-Based Validation of Site Response for Physics-Based Ground Motion Simulations in Northern California***

Status: Selected for Funding

Sponsor: Southern California Earthquake Center

Role: PI

Amount: \$30,000

Dates: February 2024 – January 2025

Brief: This project aims to identify the source(s) of misfit/bias in ground motion estimates from 3D simulations of earthquakes when compared to the recorded data in Northern California. The outcomes of the project will be a revelation into the physical mechanism controlling source and path effects in ground motions as described by simulations and an update/enhancement of the simulation platform components.

***Geometric Parameterization of Southern California Sedimentary Basins for Site Response Analysis and Modeling***

Status: Selected for Funding

Sponsor: United States Geologic Survey

Role: PI

Amount: \$74,448

Dates: January 2023 – December 2023

Brief: This project further explores alternative means for describing lateral and other 3D features in the development of region-specific models to improve the characterization of site response in sedimentary basins. This will be accomplished by developing basin geometric parameters/metadata to be used in basin site response analysis.

***Reconciling Bias in Moderate Magnitude Earthquake Ground Motions Predicted by Cyershake Simulations***

Status: Selected for Funding

Sponsor: Southern California Earthquake Center

Role: PI

Collaborator: Jonathan P. Stewart, UCLA

Amount: \$35,000

Dates: February 2022 – April 2023

Brief: This project aims to investigate the reason(s) for the mismatch between spectral values obtained from 3D simulated and recorded ground motions in Southern California. The outcomes of the project will be a revelation into the physical mechanism controlling source and path effects in ground motions as described by simulations and an update/enhancement of the simulation platform components.

***Assessment of Usable Parameter Ranges for CSN and CSMIP Ground Motion Data to Support Ground Motion Modeling and Emergency Response Applications***

Status: Selected for Funding

Sponsor: California Strong Motion Instrumentation Program, Division of Mines and Geology, California Department of Conservation

Role: Co-PI (PI: Jonathan P. Stewart, UCLA; Co-PI's: Yousef Bozorgnia, UCLA; Monica Kohler, Caltech)

Amount: \$79,835 (USC Portion: \$14,000)

Dates: October 2021 – September 2022

Brief: This project focuses on establishing usable distance and frequency bandwidths that outline the applicable limits of the CSN (Community Seismic Network) data to leverage it as a component of future ground motion databases. The outcomes of the project will be an enrichment of available data, increased efficacy of model developments, ability to improve upon emergency response applications, opportunity to better understand ground motion mechanics and the driving factors in seismic hazard.

***Site Amplification in San Francisco Bay Region Sedimentary Basins***

Status: Selected for Funding

Sponsor: United States Geologic Survey

Role: PI

Amount: \$30,000

Dates: July 2022 – June 2023

Brief: This project focuses on developing an updated sedimentary basin seismic site response model for the San Francisco Bay Area/ Northern California region. It will follow-up on similar work performed for Southern California where geomorphic features are introduced to capture lateral extent and variability in ground motion hazard. The project is a collaboration with UCLA.

## STUDENTS

<b>Graduate Student</b>	<b>Year</b>	<b>Research Topic</b>
Piyush Vyas	4th	Dynamic Properties of Bio-cemented Sands using Enzyme Induced Calcite Precipitated (EICP) and Microbial Induced Calcite Precipitation (MICP).
Rashid Shams	3rd	Characterizing Seismic Site Response of Sedimentary Basins
Sajan K. C.	3rd	Validation of Physics-Based Earthquake Simulations and Multidimensional Site Response
Chukwuma Okonkwo	2nd	HVSR Features for Site Response Modeling using Machine Learning

<b>Postdoctoral Researcher</b>	<b>Years</b>	<b>Research Topic</b>	<b>Current Affiliation</b>
Kil-Wan Ko	2022-23	Characterizing Liquefaction Hazard through Novel Energy-Based Methods	Postdoc at UC Davis

<b>Undergraduate Researcher</b>	<b>Year</b>	<b>Research Topic</b>	<b>Current Affiliation</b>
Alexander Quiachon	Summer 2022	Seismic Site Characterization: Horizontal to Vertical Spectral Ratio (HVSR) for Determination of Site Period.	3 <sup>rd</sup> year at CO. Schl. Of Mines
Hilary Keuni	2022-23	Variability in the Biocementation Chemical Reaction and the Impacts to Mechanical Properties of Biocemented Sands.	3 <sup>rd</sup> year at USC
Anna Babchanik	Summer 2023	Frequency Characteristics and Timing of Soil Liquefaction Triggering Using Stockwell Transform	1 <sup>st</sup> year Ph.D at Stanford
Oscar Sosa Cordova	Summer 2023	The Effects of Biocementation of the Dynamic Mechanical Properties of Sand	
Beatrice Tinoco	Summer 2023	Characterization of Biocemented Soils	2 <sup>nd</sup> year at USC
Karen Clark	Summer 2024	Reconciling Bias for Moderate Magnitude Events using Numerical Simulations for the San Francisco Bay Area Region	2 <sup>nd</sup> year at UCLA
Leila Clinton	Summer 2024	Lunar Seismology and Shallow Moonquakes	1 <sup>st</sup> year at USC
Alejandra Diaz	Summer 2024	Effect of Biocementation on Strength of Sands	1 <sup>st</sup> year at USC

Darryn Dunn	Summer 2024	Application of Autoencoders in Earthquake Engineering	4 <sup>th</sup> year at Univ. of Pacific
Eliska Peacock	Summer 2024	Application of Autoencoders in Earthquake Engineering	4 <sup>th</sup> year at Stanford
Johnny Williams	Summer 2024	Application of Autoencoders in Earthquake Engineering	4 <sup>th</sup> year at LSU

<b>Pre-Collegiate Researcher</b>	<b>Year</b>	<b>Research Topic</b>	<b>Current Affiliation</b>
Syuanwei (Sandra) Lee	Summer 2024	Understanding Ground Motions through Causal Inference	OC HS of Arts; Class of 2026
Nicole Carlos	Summer 2024	Spatial Variability of Ground Motion in Los Angeles	Animo Leadership Chrtr. HS Inglewood; Class of 2026
Lucky Guevarra	Summer 2024	Seismic Insights: Earthquake Basics to Advance Shaking Metrics	Eagle Rock HS; Class of 2027
Ryan Repp	Summer 2024	Effect of Biocementation on Shear Modulus	Loyola HS; Class of 2026
Zachary Gunning	Summer 2024	Effect of Bond Degradation on Shear Modulus of Biocemented Sand	VIP HS; Class of 2026

## PUBLICATIONS

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(ORCID: <https://orcid.org/0000-0002-8939-571X>)

Google Scholar: <https://scholar.google.com/citations?user=8Jh86roAAAAJ&hl=en>)

*Underlined Name with: \* indicates Graduate Advisee; \*\* indicates Postdoc Mentee; dotted underline is PI*

### **Journals (Published)**

2024:

**Nweke, C. C.**, **\*Shams, R.**, “Southern California Basin and Non-Basin Classification Algorithm for Ground Motion Site Amplification Model Applications” *Earthquake Spectra*, <https://doi.org/10.1177/87552930241293568>.

Mohammed, S., **\*Shams, R.**, **Nweke, C. C.**, Buckreis, T. E., Kohler, M. D., Bozorgnia, Y., & Stewart, J. P. “Usability of Community Seismic Network Recordings for Ground Motion Modeling” *Earthquake Spectra*, <https://doi.org/10.1177/87552930241267749>.

**\*\*Ko, K.**, Kayen, R. E., Kokusho, T., Makbule, I., Nozu, A., **Nweke, C. C.** (2024). “Energy-Based Liquefaction Evaluation: A Case Study at the Port of Kushiro, Hokkaido, 2003 Tokachi-Oki Earthquake”, *Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 150, No. 10, pp. 05024010, <https://doi.org/10.1061/JGGEFK.GTENG-11989>, DOI: 10.1061/JGGEFK.GTENG-11989,

2023:

Ikeagwuani, C. C., **Nweke, C. C.**, & Onah, H. N. (2023). Prediction of resilient modulus of fine-grained soil for pavement design using KNN, MARS, and random forest techniques. *Arabian Journal of Geosciences*, 16(6), 388. <https://doi.org/10.1007/s12517-023-11469-z>

Carey, T. J., Mason, H. B., Asimaki, D., Athanasopoulos-Zekkos, A., Garcia, F. E., Gray, B., Lavrentiadis, G., & **Nweke, C. C.** (2023). “The 2022 Chihshang, Taiwan, Earthquake: Initial GEER Team Observations”. *Journal of Geotechnical and Geoenvironmental Engineering*, 149(5), 02823002. <https://doi.org/10.1061/JGGEFK.GTENG-11522>

2022:

**Nweke, C.C.**, Stewart, J.P., Wang, P., Brandenburg, S.J., (2022) “Site Response of Sedimentary Basins and other Geomorphic Provinces in Southern California” *Earthquake Spectra*. <https://doi.org/10.1177/87552930221088609>

**Nweke, C.C.**, Stewart, J.P., Graves, R.W., Goulet, C.A., Brandenburg, S. J. (2022) “Validating Predicted Site Response in Sedimentary Basins from 3D Ground Motions Simulations” *Earthquake Spectra*. <https://doi.org/10.1177/87552930211073159>

Omoya, M., Ero, I., Zaker Esteghamati, M., Burton, H.V., Brandenburg, S.J., Sun, H., Yi, Z., Kang, H., **Nweke, C.C.** (2022) “A Relational Database to Support Post-Earthquake Building

2021:

Goulet, C. A., Wang, Y., Nweke, C. C., Tang, B., Wang, P., Hudson, K. S., Ahdi, S. K., Meng, X., Hudson, M. B., Donnellan, A., Lyznega, G., Brandenburg, S. J., Stewart, J. P., Gallien, T., Winters, M. A., Hudnut, K. W. (2021) “Comparison of Near-Fault Displacement Interpretations from Field and Aerial Data for the M6.4 and M7.4 Ridgecrest Earthquake Sequence Ruptures”, *Bull. Seismol. Soc. Am.* 111 (5), 2317–2333, doi: [10.1785/0120200222](https://doi.org/10.1785/0120200222)

Ikeagwuani, C. C., Nwonu, D.C., Nweke, C. C. (2021) “Resilient modulus descriptive analysis and estimation for fine-grained soils using multivariate and machine learning methods”, *International Journal of Pavement Engineering*, 0 (0), 1-16, <https://doi.org/10.1080/10298436.2021.1895993>

2020:

Ahdi, S.K., S. Mazzoni, T. Kishida, P. Wang, C. C. Nweke, N. M. Kuehn, V. Contreras, B. Rowshandel, J. P. Stewart, and Y. Bozorgnia (2020). “Engineering Characteristics of Ground Motions Recorded in the 2019 Ridgecrest Earthquake Sequence”, *Bull. Seismol. Soc. Am.* 110 (4), 1474–1494, doi: [10.1785/0120200036](https://doi.org/10.1785/0120200036)

Zimmaro, P., C. C. Nweke, J. L. Hernandez, K. S. Hudson, M. B. Hudson, S. K. Ahdi, M. L. Boggs, C. A. Davis, C. A. Goulet, S. J. Brandenburg, et al. (2020). “Liquefaction and Related Ground Failure from July 2019 Ridgecrest Earthquake Sequence”, *Bull. Seismol. Soc. Am.* 110 (4), 1549–1566, doi: [10.1785/0120200025](https://doi.org/10.1785/0120200025)

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., Lucey, J., Kim, Y., Gallien, T. W., Lyda, A., Yeung, J. S., Issa, O., Buckreis, T. (2020). “Ground Deformation Data from GEER Investigations of Ridgecrest Earthquake Sequence”. *Seismological Research Letters*. 110 (4), 2024-2034, <https://doi.org/10.1785/0220190291>

Mangalathu, S., Sun, H., Nweke, C. C., Yi, Z., & Burton, H. V. (2020). “Classifying earthquake damage to buildings using machine learning”. *Earthquake Spectra*, 36(1), 183–208. <https://doi.org/10.1177/8755293019878137>

### **Journals (Accepted)**

\*\*Ko, K., Kayen, R. E., Nweke, C. C. “Estimation of Timing of Liquefaction Using Spectral Energy Ratio” Accepted to the ASCE Journal of Geotechnical and Geoenvironmental Engineering.

## **Journals (Submitted)**

Buckreis, T. E., Nweke, C. C., Wang, P., Brandenburg, S. J., Ramos-Sepulveda, \*Shams, R., Pretell, R., Mazzoni, S., Zimmaro, P., & Stewart, J. P. “*An API-Enabled Earthquake Ground Motion Relational Database*” Submitted to Earthquake Spectra

Burton, H. V., Galicia Madero, S., Wu, C., \*Shams, R., & Nweke, C. C., “*Quantifying the Realized and Unrealized Benefits of Seismic Interventions Using Causal Inference*” Submitted to Natural Hazards Journal.

Ilgac, M., Athanasopoulos-Zekkos, A., Nweke, C. C., Ktenidou, O-J., Peterson, K., & Kayen, R. E., “*Embankment Vibration Characteristics Using Ground Motion Records and Ambient Noise Measurements, Briones Dam, California*” Submitted to Soils and Foundation.

\*Shams, R., Nweke, C. C., & Parker, G. A. “*Identify Geometric Parameters for Site Response Modeling in Los Angeles and other Sedimentary Basins in Southern California*” Submitted to Earthquake Spectra.

\*Shams, R., Nweke, C. C., & Parker, G. A. “*Seismic Site Response Models based on Geometric Parameters for Southern California Sedimentary Basins*” Submitted to Earthquake Spectra.

## **Conference Papers**

2024:

\*Vyas, P., & Nweke, C. (2024, October). Characterizing the Degradation Threshold of Biocemented Sands for Transportation Infrastructure: Insights from Resonant Column Test. In *International Conference on Transportation Geotechnics* (pp. 215-224). Singapore: Springer Nature Singapore.

Ornelas, F. J., Nweke, C. C., de la Torre, C. A., Wang, P., \*Mai, T. D., Cox, B. R., Brandenburg, S. J., & Stewart, J. P. (2024). Reliability of low frequency mHVSr ordinates. *Proceedings of the 18<sup>th</sup> World Conference on Earthquake Engineering (18WCEE), Milan, Italy*.

Buckreis, T. E., Nweke, C. C., Wang, P., Brandenburg, S. J., \*Shams, R., Ramos-Sepulveda, M. E., Pretell, R., Mazzoni, S., & Stewart, J. P. (2024). User-interaction with a web-served global ground motion relational database. *Proceedings of the 18<sup>th</sup> World Conference on Earthquake Engineering (18WCEE), Milan, Italy*.

Ornelas, F. J. G., Buckreis, T. E., Nweke, C. C., Wang, P., de La Torre, C. A., Brandenburg, S. J., & Stewart, J. P. (2024). Preliminary observations of an ergodic site response model in California conditioned on Vs30 and HVSr parameters. *Proceedings of the 8<sup>th</sup> International Conference on Earthquake Geotechnical Engineering (8ICEGE 2024), Osaka, Japan; Japanese Geotechnical Society Special Publication, 10(47), 1769-1774*.



\*Shams, R., & Nweke, C. C. Capturing the Path Dependency of Site Response in Basin and Non-Basin Southern California Locations. In *Geo-Congress 2024* (pp. 411-419). <https://doi.org/10.1061/9780784485316.043>

\*KC, S., Nweke, C. C., Stewart, J. P., & Graves, R. W. Reconciling Bias in Moderate Magnitude Earthquake Ground Motions Predicted by Numerical Simulations. In *Geo-Congress 2024* (pp. 420-429). <https://doi.org/10.1061/9780784485316.044>

2023:

Stewart, J. P., Mohammed, S., Nweke, C. C., \*Shams, R., Buckreis, T. E., Kohler, M. D., & Bozorgnia, Y. (2023). Comparison of Ground Motions from CSN Instruments and Proximate Sensors from Other Networks. *Proceedings of SMIP23 Seminar on Utilization of Strong Motion Data.* <https://www.conservation.ca.gov/cgs/documents/program-smi/seminar/SMIP23-P6-Paper-by-Stewart.pdf>

Buckreis, T. E., Nweke, C. C., Wang, P., Brandenburg, S. J., Mazzoni, S., & Stewart, J. P. (2023). Relational Database for California Strong Ground Motions. In *Geo-Congress 2023* (pp. 461-470). <https://doi.org/10.1061/9780784484692.047>

2022:

Birkel, B. C., Vidale, J. E., & Nweke, C. C. (2022, December). Comparison of Observed and Simulated Ground Motions in the Los Angeles Basin. In *AGU Fall Meeting Abstracts* (Vol. 2022, pp. S45B-04).

Brandenberg, S. J., Goulet, C. A., Zimmaro, P., Wang, Y., Nweke, C. C., Tang, B., Wang, P., Hudson, K. S., Ahdi, S. K., Meng, X., Hudson, M. B., Donnellan, A., Lyznega, G., Stewart, J. P., Gallien, T., Winters, M. A. (2022) Fault Rupture and Liquefaction Feature Mapping with Unmanned Aerial Systems after the Ridgecrest Earthquake Sequence. In *12NCEE 2022.*

Nweke, C.C., Stewart, J.P., Wang, P., Brandenburg, S.J., (2022) Sedimentary Basin Site Response for Different Basin Types in Southern California. In *12NCEE 2022.* <https://escholarship.org/uc/item/6vh7q486>

Nweke, C.C., Davis, C.A., Hudson, K.S., Hudnut, K.W., Brandenburg, S.J., Stewart, J.P. (2022) Performance of Water Pipelines at Fault Crossings From the 2019 Ridgecrest Earthquakes. In *Lifelines 2022: San Fernando Earthquake Conference – 50 Years of Lifeline Engineering* (pp. 343-355), ASCE Infrastructure Resilience at University of California, Los Angeles, February 7-11, 2022. <https://www.doi.org/10.1061/9780784484449.031>

Ahdi, S.K., Stewart, J.P., Kwak, D., Zimmaro, P., Nweke, C.C., Hudson, K.S., Yong, A.K., Brandenburg, S.J., Hudson, M.B., Bozorgnia, Y. (2022) Seismic Site Characterization Data for Lifelines and Other Applications – A 50 Year Retrospective in Los Angeles, California, In *Lifelines 2021/2022: San Fernando Earthquake Conference – 50 Years of Lifeline Engineering*

(pp. 186), ASCE Infrastructure Resilience at University of California, Los Angeles, February 7-11, 2022. <https://www.doi.org/10.34948/N3QP4X>

2018:

Nweke, C.C., Wang, P., Brandenburg, S.J., Stewart, J.P., (2018). Reconsidering Basin Effects in Ergodic Site Response Models, *Proceedings of SMIP2018 Seminar on Utilization of Strong Motion Data, California Strong Motion Instrumentation Program, Sacramento, CA*. <https://escholarship.org/content/qt6048v74k/qt6048v74k.pdf>

Nweke, C. C., & Pestana, J. M. (2018). Modeling Bio-Cemented Sands: A Strength Index for Cemented Sands. In *IFCEE 2018* (pp. 48-58). <https://doi.org/10.1061/9780784481592.006>

2017:

Nweke, C. C., & Pestana, J. M. (2017). Modeling Bio-Cemented Sands: Shear Strength and Stiffness with Degradation. In *Grouting 2017* (pp. 34-45). <https://doi.org/10.1061/9780784480793.004>

### **Technical Reports**

2024:

O'Donnell, T.M., Hudson, K. S., Ornelas, F. J. G., Stewart, J. P., Brandenburg, S. J., Nweke, C. C., Zimmaro, P. (2024). Site Characterization and Liquefaction Analysis at Searles Lake, Ca following 2019 Ridgecrest Earthquake Sequence, *UCLA B. John Garrick Institute for the Risk Sciences Report GIRS-2024-03*, doi: 10.34948/N3F302, <https://doi.org/10.34948/N3F302>

Asimaki, D., Mason, H. B., Anthanasopoulos-Zekkos, A., Carey, T. J., Garcia, F. E., Gray, B., Lavrentiadis, G., Nweke, C. C., Chou, C., Wu, C., Lee, Z., Chang, W., Chen, K., Lin, S., Lin, C., Lin, C., Wang, K., Lin, J., Lee, Y. (2024). Geotechnical Engineering Reconnaissance Of The 2022 Chihshang Earthquake Sequence, *Geotechnical Extreme Events Reconnaissance Association Report*” GEER-083, <https://doi.org/10.18118/G65M23>

2023:

Stewart, J. P., Mohammed, S., Nweke, C. C., \*Shams, R., Buckreis, T. E., Kohler, M. D., & Bozorgnia, Y. (2023) Usability of Ground Motions Recorded by Community Seismic Network, *UCLA B. John Garrick Institute for the Risk Sciences Report GIRS-2023-08*, doi: 10.34948/N36K5M, <https://doi.org/10.34948/N36K5M>

2022:

Burton, H. V., Dwima, S., Gho, D., Guan, X., Gunay, S., Gupta, A., Khalil, Z., Kusumayani, N., Marinkovic, M., Merino, Y., Nweke, C. C., Safiey, A., Mosalam, K. (2022) StEER 2022

Mw 5.6 Indonesia Earthquake Preliminary Virtual Reconnaissance Report (PVRR), in *StEER November 21, 2022, Indonesia, Mw 5.6 Earthquake*. DesignSafe-CI. v1 <https://doi.org/10.17603/ds2-e2vq-nq61>

2020:

**Nweke, C.C.**, Stewart, J.P., Brandenburg, S.J., (2020). Site Response of Southern California Sedimentary Basins and Other Geomorphic Provinces. *UCLA B. John Garrick Institute for the Risk Sciences Report GIRS-2020-12*, doi: 10.34948/N3159F, <https://www.risksciences.ucla.edu/girs-reports/2020/12>

2019:

Stewart, J.P., **Nweke, C.C.**, Goulet, C.A., Graves, R.W., (2019) CyberShake Simulation Validation using Ground Motion Recordings. *Southern California Earthquake Center Report SCEC-18136*, <https://www.scec.org/proposal/report/18136>

Stewart, J.P. (ed.), Brandenburg, S.J., Wang, Pengfei, **Nweke, C.C.**, Hudson, K., Mazzoni, S., Bozorgnia, Y., Hudnut, K.W., Davis, C.A., Ahdi, S.K., Zareian, F., Fayaz, J., Koehler, R.D., Chupik, C., Pierce, I., Williams, A., Akciz, S., Hudson, M.B., Kishida, T., Brooks, B.A., Gold, R.D., Ponti, D.J., Scharer, K.M., McPhillips, D.F., Ericksen, T., Hernandez, J., Patton, J., Olson, B., Dawson, T., Treiman, J., Duross, C.B., Blake, K., Buchhuber, J., Madugo, C., Sun, J., Donnellan, A., Lyzenga, G., and Conway, E., (2019). Preliminary report on engineering and geological effects of the July 2019 Ridgecrest Earthquake sequence: Geotechnical Extreme Events Reconnaissance Association Report, GEER-064, <https://doi.org/10.18118/G6H66K>.

Stewart, J.P., **Nweke, C.C.**, Wang, P., Bozorgnia, Y., Brandenburg, S.J., (2019). Effects of Factors Beyond Sediment Depth on Site Response in Southern California Basins, *Report prepared for the California Department of Transportation*.

2015:

Weber, J.P., Seed, R.B, Pestana, J. M., Moss, R.E.S., **Nweke, C.C.**, Deger, T.T., Chowdhury, K. (2015). Engineering Evaluation of Post Liquefaction Residual Strength. Vol. 1&2. 400 pages. *Report prepared for U.S. Nuclear Regulatory Commission*.

### **Published Database**

2024:

Mohammed, S., \***Shams R.**, Buckreis, T. E., **Nweke, C. C.**, Kohler, M. D., Bozorgnia, Y., Stewart, J. P. (2024) Data Files for Community Seismic Network (CSN) Ground Motion Study. DesignSafe-CI. <https://doi.org/10.17603/ds2-3e79-4e07> v1

**Nweke, C. C.**, \***R. Shams**, \***P. Vyas**, \***S. K.C.**, F. Ornelas. (2024) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSr) Data Collection at Baldwin Hills, 2023, in *Microtremor*

*Measurements Performed Within Southern California.* DesignSafe-CI. <https://doi.org/10.17603/ds2-sekd-j098> v1

Nweke, C. C., \*R. Shams, \*P. Vyas, \*S. K.C., F. Ornelas. (2024) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Data Collection at Griffith Park, 2023, in *Microtremor Measurements Performed Within Southern California.* DesignSafe-CI. <https://doi.org/10.17603/ds2-bjq5-xv26> v1

Nweke, C. C., T. Buckreis, F. Ornelas, (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> v1

Nweke, C. C., T. Buckreis, F. Ornelas, (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> v1

2023:

Ornelas, F., Nweke, C., O'Donnell, T., Hudson, K., Brandenburg, S., & Stewart, J. (2023) Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Data Collection at Searles Lake, 2023, in *Microtremor Horizontal-to-Vertical Spectral Ratio (mHVSR) Site Characterization of California Vertical Arrays.* DesignSafe-CI. <https://doi.org/10.17603/ds2-1fcj-p013> v2

Ornelas, F-J, G., de la Torre, C., Nweke, C. C., Buckreis, T. E., Wang, P., Bradley, B., Brandenburg, S. J., Stewart, J. P. (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>

2022:

Burton, H. V., Dwima, S., Gho, D., Guan, X., Gunay, S., Gupta, A., Khalil, Z., Kusumayani, N., Marinkovic, M., Merino, Y., Nweke, C. C., Safiey, A., Mosalam, K. (2022) 2022 Mw 5.6 Indonesia Earthquake Media Repository, in *StEER November 21, 2022, Indonesia, Mw 5.6 Earthquake.* DesignSafe-CI. v1 <https://doi.org/10.17603/ds2-e2vq-nq61>

Nweke, C.C., Stewart, J.P., Wang, P., Brandenburg, S.J., Buckreis, T.E. (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>

2021:

Omoya, M., Ero, I., Esteghamati, M.Z., Burton, H.V., Brandenburg, S.J., Nweke, C.C. (2021) “Relational Database for Post-Earthquake Damage and Recovery Assessment: 2014 South Napa Earthquake” Designsafe-CI. <https://doi.org/10.17603/ds2-3nvj-4127>

2019:

**Nweke, C.**, Graves, R., Goulet, C.A., Brandenburg, S. Stewart, J. (2019) "*Forward Simulation of Earthquakes in Southern California with UCVMs*", in Southern California Earthquake Center (SCEC) Simulation Validation for Southern California Basins using Ground Motion Recordings. DesignSafe-CI. <https://doi.org/10.17603/ds2-762f-sg15>.

Brandenburg, S.J., Goulet, C.A., Wang, P., **Nweke, C.C.**, Davis, C.A., Hudson, M.B., Hudson, K.S., Ahdi, S.K., and Stewart, J.P. (2019). "*GEER Field Reconnaissance*." In Ridgecrest, CA Earthquake Sequence, July 4 and 5, 2019, Designsafe-CI. <https://doi.org/10.17603/DS2-VPMV-5B34>.

### **Media Articles**

Katherine Kornei, (December 2021) "Earthquakes Ripple Through 3D Printed Models of Los Angeles", EOS, Science News by The American Geophysical Union. <https://eos.org/articles/earthquakes-ripple-through-3d-printed-models-of-los-angeles>

**Nweke C.C.**, (November 2020) "Civil & Environmental Engineering Postdoc Recounts Journey from Nigeria". UCLA Samueli Newsroom. <https://samueli.ucla.edu/civil-environmental-engineering-postdoc-recounts-journey-from-nigeria/>

Gardner, M., Lanzafame, R., Cohen-Waeber, J., **Nweke, C. C.**, (April 2018). *Lessons learned from Geolegends: Richard E. Goodman, PhD, NAE*. Geostrata – Geo Institute of ASCE, 22(2) pp. 26-30,32-33.

## **PRESENTATIONS**

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### **Invited Lectures and Seminars**

Nweke, C. C., *Geometric Parameterization of Southern California Sedimentary Basins for Site Response Analysis and Modeling*. Presentation for the 2024 COSMOS (Consortium of Organizations for Strong Motion Observations Systems) Technical Session and Annual Meeting, Oakland, CA [November 2024]

Nweke, C. C., *Quantifying the Causal Effect between Seismic Site Response and Local-to-Regional Site Conditions: Sedimentary Basin Amplification and Relational Ground Motion Database*. Presentation for the New Zealand QuakeCoRE IP1 & IP2 Monthly Joint Meeting Seminar (Attendance from members at the University of Auckland and the University of Canterbury). [August 2024]

Nweke, C. C., *Geometric Parameterization of Southern California Sedimentary Basins for Site Response Analysis and Modeling*. Presentation for the Civil Engineering Geosystems Group Lecture Series at the University of California, Berkeley [February 2024]

Nweke, C. C., *Reconciling Bias in Moderate Magnitude Earthquake Simulations: Validation and Calibration of Physics-Based Ground Motion Simulations in Southern California*. Presentation for Structural Engineering and Mechanics Seminar at Stanford University [January 2024]

Nweke, C. C., *Data Science in Geotechnical Earthquake Engineering: Seismic Site Response of Sedimentary Basins*. Presentation in the session titled “Emerging modeling techniques in geotechnical earthquake engineering: Research to practice” for the 8<sup>th</sup> Annual ASCE Geo-Institute Web Conference [December 2023]

Nweke, C. C., *Geometric Parameterization of Sedimentary Basins for Site Response Analysis and Modeling*. Presentation (Lightening) in the “Advancement in Modeling Physical Impacts of Disasters Track for the 2023 Researcher Meeting (48<sup>th</sup> Annual Natural Hazards Research and Applications Workshop) hosted by the Natural Hazards. Center and the Natural Hazards Engineering Research Infrastructure (NHERI) CONVERGE Facility, held in Broomfield, CO [July 2023]

Nweke, C. C., Stewart, J.P., Brandenberg, S.J., *Pending Study on Regional Site Response in The Greater San Francisco Bay Area*. Presentation for the San Francisco – Bay Area Community Velocity Model (SF-CVM) Workshop hosted by the United States Geologic Survey (USGS) [February 2023]

Nweke, C. C., *Seismic Site Response in Southern California Sedimentary Basins*. Presentation for the Department of Earth Sciences Seminar at the University of Southern California [February 2023]

Nweke, C. C., *Seismic Site Response in Southern California Sedimentary Basins*. Presentation for the 2023 Geo-Congress Sneak Preview Seminar Series Hosted by the American Society of Civil Engineers Geo-Institute (ASCE-GI) [December 2022] [Video Link](#).

Nweke, C. C., *Seismic Site Response in Sedimentary Basins*. Presentation for the Fall Seminar Series Hosted by the Geotechnical Graduate Student Society (GGSS) of the Civil and Environmental Engineering Department at the University of California, Davis (UCD) [October 2022]

Nweke, C. C., *Seismic Hazard Parameters for Site Response Analysis and Assessment: Basin Effects*. Presentation for the Geotechnical Site Characterization Seminar Hosted by ASCE Orange County Geo-Institute at Irvine, CA [July 2022]

Nweke, C. C., *Seismic Site Response in Sedimentary Basins*. Presentation for the Spring Seminar Series Hosted by the Geotechnical group of the Department of Structural Engineering at the University of California, San Diego (UCSD) [May 2022]

Nweke, C. C., *Seismic Site Response in Sedimentary Basins*. Presentation for the Spring Seminar Series Hosted by the Geotechnical group of the Department of Civil and Environmental Engineering at the University of Washington (UW) [April 2022]

Nweke, C. C., *Seismic Site Response in Sedimentary Basins*. Presentation for the Fall Seminar Series Hosted by the Department of Civil and Environmental Engineering at the University of California, Irvine (UC Irvine) [November 2021]

Nweke, C. C., *Seismic Site Response in Sedimentary Basins*. Presented to the Seismo Lab at the California Institute of Technology (Caltech) [October 2021]

Nweke, C. C., *Site Response of Sedimentary Basins and other Geomorphic Provinces in Southern California*. Presented to the Community Seismic Network Group at the California Institute of Technology (Caltech) [August 2021]

Nweke, C. C., *Sedimentary Basin Effects in Ground Motions from Empirical Models and Simulation Platforms*. Presented at the Department of Civil and Environmental Engineering Seminar Series at Rensselaer Polytechnic Institute [April 2021]

Nweke, C. C., *Seismic Site Response in Sedimentary Basins and Other Geomorphic Domains*. Presented to the Geotechnical group at University of Massachusetts, Dartmouth [November 2020]

Nweke, C. C., *Sedimentary Basin Effects in Ground Motions from Empirical Models and Simulation Platforms*. Presented at the Earthquake Seminar Series (<https://earthquake.usgs.gov/contactus/menlo/seminars/1297>) to the Earthquake Science Center at United States Geologic Survey [September 2020]

Nweke, C. C., *Basin Effects in Simulated and Observed Ground Motions for Southern California*. Presented to the ARUP Geotechnical Group [May 2020]

Nweke, C. C., *Nature & Infrastructure Harmony – Resilient methods, Reliable systems, and Resilient Design: Seismic Hazards*. Presented at the Department of Biosystems and Agricultural Engineering Seminar, University of Kentucky [September 2019]

Nweke, C. C., *A Constitutive Model for Weakly Cemented Sands*. Presented at the Geotechnical Graduate Students Society Seminar, University of California, Davis [February 2019]

Nweke, C. C., *Reconsidering Basin Effects in Ergodic Site Response Models*. Presented at the Geotechnical Lecture Series, Oregon State University [February 2019]

Nweke, C. C., *Nature & Infrastructure Harmony – Resilient methods, Reliable systems, and Resilient Design: Seismic Hazards*. Presented at the Sonny Astani Department of Civil and Environmental Engineering Seminar, University of Southern California [January 2019]

Nweke, C. C., *Reconsidering Basin Effects in Ergodic Site Response Models*. Presented at the Civil Engineering Seminar Series, Loyola Marymount University [November 2018]

Nweke, C. C., *The Life and Experience of an Engineer who is Black in Academia*. Presented at the Civil Engineering Seminar Series, Loyola Marymount University [November 2018]

Nweke, C. C., *Constitutive Modeling of Weakly Cemented Sands*. Presented at the Samueli School of Engineering Civil Engineering Seminar Series, University of California, Irvine [October 2018]

Nweke, C. C., *Constitutive Modeling of Weakly Cemented Sands*. Presented at the 2018 California Alliance Retreat, Berkeley, CA

Nweke, C. C. and Pestana, J. M. *Modeling Bio-Cemented Sands: A Strength Index for Cemented Sands*. Presented at the 2017 RIT Future Faculty Career Exploration Program

## **Guest Lectures**

“Natural Hazards – Earthquakes: Impacts to Infrastructure and Communities”, CE-EC 100: Geologic Hazards and Pop Culture – Myths Versus Reality, Boise State University [ Fall 2021, Fall 2023]

“*Shear Strength of Sands and Clays*”, CEE220: Advanced Soil Mechanics, University of California, Los Angeles [Fall 2018]

“*Numerical Modeling In Foundation Engineering using PLAXIS2D and 3D*”, CIVL411: Foundations, Loyola Marymount University [Spring 2018]

“*Consolidation in soft soils*” CEE120: Principles of Soil Mechanics, University of California, Los Angeles [Fall 2017]

## **Conference Presentations**

\*Shams, R., Nweke, C. C., *Capturing the Path Dependency of Site Response in Basin and Non-Basin Southern California Locations*. Presented at ASCE Geo-Institute GeoCongress 2024 in Vancouver, Canada [February 2024]

Nweke, C. C., Stewart, J. P., Wang, P., Brandenburg, S. J., *Sedimentary Basin Site Response for Different Basin Types in Southern California*. Presented at the 12<sup>th</sup> National Conference on Earthquake Engineering (12NCEE) in Salt Lake City, UT [June 2022]

Nweke, C. C., *Basin Effects in Simulated and Observed Ground Motions for Southern California*. Presented at Consortium of Organizations for Strong Motion Observation Systems (COSMOS) Technical Session [January 2021]

Nweke, C. C., *Basin Effects in Simulated and Observed Ground Motions for Southern California*. Presented at the 2020 National Earthquake Conference in San Diego [March 2020]

Nweke, C. C., *Not the Big One, But some Good Ones: Strong Motion Data and Geotechnical Engineering Impacts from the Ridgecrest Earthquake Sequence*. Presented at the Geo-PIT Speaker Series during the ASCE Geo-Institute GeoCongress 2020 in Minneapolis [February 2020] [Video Link](#).

Nweke, C. C., *Sedimentary Basin Amplification in Southern California Based on Physics-Based Simulations*. Presented at the Le Val Lund Student Symposium, California Institute of Technology [November 2019]

Nweke, C. C., *Sedimentary Basin Amplification in Southern California Based on Physics-Based Simulations*. Presented at the NSF Alliance for Graduate Education and the Professoriate (AGEP) Research Exchange Retreat, Mechanical and Civil Engineering, Stanford University [October 2019]

Nweke, C. C., *Reconsidering Basin Effects in Ergodic Site Response Models*. Presented at the 2019 Annual Pacific Earthquake Engineering Research (PEER) Meeting, University of California, Los Angeles [January 2019]



Stewart, J. P., and Nweke, C. C., *Reconsidering Basin Effects in Ergodic Site Response Models*. Presented at the Le Val Lund Student Symposium, University of Southern California [November 2018]

Nweke, C. C. and Pestana, J. M. *Modeling Bio-Cemented Sands: A Strength Index for Cemented Sands*. Presented at the 2018 International Foundation Congress and Equipment Exposition (IFCEE 2018)

Nweke, C. C. and Pestana, J. M. *Modeling Bio-Cemented Sands: Shear Strength and Stiffness with Degradation*. Presented at the 2017 Grouting Conference

### **Panels and Media**

Host of 2<sup>nd</sup> episode of ASCE G-I Books Rock Interview. Interviewed Praveen Malhotra on his book “*Site-Specific Ground Motions for Seismic Design of Buildings and Other Structures*” [October 2024] [Video Link](#)

“*Field Trips with The ASCE Institutes*” Season 3 Episode 2, ASCE Geo-Institute [May 2024] [Video Link](#).

“*Impacts of Natural Hazards of Infrastructure*”, The Geotechnical Engineering Podcast [November 2022] [Video Link](#).

“*Maximizing your PhD: Preparing for Academia or Industry*”, 44<sup>th</sup> Annual Convention, National Society of Black Engineers [March 2018]

## **TEACHING EXPERIENCE**

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**University of Southern California**, Civil and Environmental Engineering Department

### **Instructor**

***CE 599: Ground Vibrations and Response*** [Spring 2024]

Characterizing ground vibration hazards; wave propagation in subsurface materials, earthquakes, ground failures, and ground response assessment through mixed models, causal inference, and spatial statistics.

***CE 482: Subsurface Foundation Design*** [Fall 2022, Fall 2024]

Site exploration and characterization; analysis and design of structural foundations, including spread footings, mats, piles and drilled shafts; retaining wall and braced excavation design.

**University of California, Los Angeles**, Civil and Environmental Engineering Department

### **Instructor**

***ENGR 87: Introduction to Engineering Disciplines*** [Fall 2018; Fall 2019]

Part of a group of four instructors leading a course for freshman engineering students to explore differences between engineering disciplines and the functions engineers perform. We instruct students on the required skills (computer

programming, analysis techniques, etc.), and coordinated teams to enable further development.

#### **University of California, Berkeley, Civil and Environmental Engineering Department**

##### **Graduate Student Instructor/Teaching Assistant**

*ENG 7: Introduction to Computer Programming* [Spring 2016]

*CE 270: Advanced Geomechanics* [Fall 2015]

##### **Reader/Grader**

*CE 130/ME 85: Introduction to Solid Mechanics* [Summer 2014]

*CE 275: Geotechnical Earthquake Engineering* [Fall 2013]

#### **Citizens Schools at the United for Success Academy, Oakland CA**

##### **Volunteer “After School” Teacher**

*Dam Well Done*, [Spring 2013]

Designed and executed lesson plans to teach middle school students (mixed class of 6<sup>th</sup> – 8<sup>th</sup> graders) how to build a miniature Mechanically Stabilized Earth Retaining Wall (MSE Wall) using a prefabricated wooden box filled with beach sand, a poster board for the wall, and Kraft paper for reinforcing strips.

#### **Los Padrinos Juvenile Detention School, Downey CA**

**Tutor**, [Summer 2009]

Served as an additional teaching source for student inmates. Assisted in executing lesson plans for Math and Science curriculum. Focus was placed on Pre-Algebra, Algebra, Geometry, Biology, and Pre-Physics.

## **LEADERSHIP AND PROFESSIONAL AFFILIATIONS**

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### Professional Memberships and Affiliations:

- Seismological Society of America (SSA), **Member** [2022 – Present]
- Earthquake Engineering Research Institute (EERI), **Member** [2018 – Present]
- Consortium of Organizations for Strong Motion Observation Systems (COSMOS):
  - **Member** [2021 – Present]
  - Early Career and Student Engagement Committee, **Member** [2021 – Present]
- National Center for Faculty Development and Diversity, **Member** [2017 – Present]
- Geotechnical Extreme Event Reconnaissance (GEER), **Member** [2016 – Present]
  - 2019 Ridgecrest Earthquake Sequence (Ridgecrest Earthquake events, **M**6.4 & **M**7.1) Reconnaissance Team.
- Geo-Institute
  - **Member** [2012 – Present]
  - Soil Properties and Modeling Technical Committee, **Member** [2017 – Present]
  - Earthquake Engineering and Soil Dynamics Committee, **Member** [2019 – Present]
- American Society of Civil Engineers (ASCE), **Member** [2010 – Present]

- National Society of Black Engineers (NSBE):
  - **Member** [2010 – Present]
  - Region Six **Programs Chair** [2011 – 2012]

Academic Service (Peer Reviewer):

#### Journals

- ASCE Natural Hazards Review Journal: 2019, 2020, 2021, 2022, 2024
- Earthquake Spectra: 2021, 2023, 2024
- ASCE Journal of Geotechnical and Geoenvironmental Engineering: 2021, 2023, 2024
- Seismological Research Letters: 2022
- Earthquake Engineering and Structural Dynamics: 2022, 2024
- Geophysical Journal International: 2023
- Nature Natural Hazards Journal: 2023, 2024
- Bulletin of the Seismological Society of America: 2024

#### Conferences

- Conference paper **reviewer**, 2025 International Conference on Bio-mediated and Bio-inspired Geotechnics [2024 – 2025]
- Conference paper **reviewer**, 2022 Geo-Congress in Los Angeles, ASCE Geo-Institute Earthquake Engineering & Soil Dynamics, Soil Properties & Modeling Committee [2022 – 2023]
- Conference paper **reviewer**, 2022 12NCEE in Salt Lake City, Earthquake Engineering Research Institute [2021 – 2022]
- Conference paper **reviewer**, 2020 Geo-Congress in Minneapolis, ASCE Geo-Institute Soil Properties & Modeling Committee [2019 – 2020]
- Conference paper **reviewer**, 2018 IFCEE Conference in Orlando, ASCE Geo-Institute Soil Properties & Modeling Committee [2017 – 2018]

#### Proposals

- United States Geologic Survey (USGS) Earthquake Hazard Program (EHP): 2021
- National Science Foundation: 2023, 2024

Leadership and Other Affiliations:

- National Science Foundation (NSF) California Alliance Community Engagement Board, **Member** [2018 – 2020]
- Black Graduate Engineering and Science Students Association, UC Berkeley:
  - **Communications Chair** [2015 – 2017]
  - **Member** [2012 – 2017]
- American Society of Civil Engineers Mid-Pac Geo-Challenge Team (ASCE), UC Davis, **Captain** [2010 – 2012]
- Black Engineers Association, University of California, Davis NSBE Chapter:
  - **Member** [2010 – 2012]
  - **President** [2010 – 2011]

## **DISTINCTIONS AND AWARDS**

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**2023 Outstanding Reviewer**, EERI Earthquake Spectra Journal. One of 10 selected worldwide

**Editor's Choice Paper**, EERI Earthquake Spectra Journal for "*Site Response of Sedimentary Basins and other Geomorphic Provinces in Southern California*" [Nov. 2022]

**2021 – 2022 Provost Faculty Fellowship**, University of Southern California

**2020 Georgia Institute of Technology Focus Fellow**

**National Science Foundation (NSF) Alliance for Graduate Education and the Professoriate (AGEP); California Alliance Postdoctoral Fellow: UCLA;** [2017 – 2020]

**2017 University of Michigan NEXTProf Participant**

**2017 Rochester Institute of Technology Future Faculty Career Exploration Program Participant**

One of seventeen selected

**NSF Leverage Awardee and Participant;** NSF Grants #1649384 & #1548322 (2016, 2017, 2018, 2019)

**University of California (UC) Dissertation Award** Fall 2016 – Spring 2017  
One of twelve awarded

**NSF Bridge-to-Doctorate Fellowship** Fall 2012 – Spring 2014  
One of nine awarded

**Ford Foundation Fellowship** 2016 Dissertation Competition, Honorable Mention

## **SERVICE**

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- **Committee Member**, Ph.D. Qualification Exam: Shuye Huang, Earth Science Department, USC; Advisor – Yehuda Ben-Zion [2024]
- **Committee Member**, Ph.D. Qualification Exam: Chen-Mao Chen, Earth Science Department, USC; Advisor – Josh West [2024]
- **Committee Member**, Ph.D. Dissertation Defense: Maria Ramos-Sepulveda, Civil and Environmental Engineering Department, UCLA; Advisor – Jonathan P. Stewart [2024]
- **Advisory Board Member**, Center for Engineering Diversity/Women in Engineering, Viterbi School of Engineering, University of Southern California [January 2024 – Present]
- **Coordinator/Host**, COSMOS Early Career Professionals and Student Meeting at The Sonny Astani Department of Civil and Environmental Engineering, University of Southern California. [November 2023]

- **Moderator**, “Innovations in Hazard Modeling” Session, 2023 Researchers Meeting at the 48<sup>th</sup> Annual Natural Hazards Research and Applications Workshop
- **Member**, USC Civil and Environmental Engineering Department Seminar Committee [2021-Present]
- **Coordinator**, Seismological Society of America (SSA) 2022 Session: “*The Effects of Sedimentary Basins on Earthquake Ground Motions*”
- **Co-coordinator**, Consortium of Organizations for Strong Motion Observation Systems (COSMOS) 2021 Technical Session: “*Early Career and Students Session Panel*” Sponsored by FEMA
- **Chair**, Site Response and Data Session at the ASCE Geo-Congress 2023 in Los Angeles

## **OUTREACH**

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- **Faculty Mentor**, Apple NACME (National Action Council for Minorities in Engineering) AI/ML Intensive, Student: Darryn Dunn, Eliska Peacock, Johnny Williams [Summer 2024]
- **Faculty Mentor**, SHINE (Summer High School Intensive in Next-Generation Engineering) USC, Student: Nicole Carlos, Syuanwei (Sandra) Lee, Ryan Repp, Zachary Gunning, Lucky Guevarra [Summer 2024]
- **Faculty Mentor**, VSI (Viterbi Summer Institute) USC, Student: Beatrice Tinoco [Summer 2023], Leila Clinton, Alejandra Diaz [Summer 2024]
- **Faculty Mentor**, CURVE (Center for Undergraduate Research in Viterbi Engineering) USC, Student: Hilary Keuni [Fall 2022 – Spring 2023]
- **Faculty Mentor**, SURE (Summer Undergraduate Research Experience) USC, Student: Alex Quiachon [Summer 2022], Anna Babchanik, Oscar Sosa Cordova [Summer 2023], Karen Clark [Summer 2024]
- **Mentor**, SMASH (Summer Math and Science Honor Academy) UCLA [Summer 2019, 2020]
- **Coordinator**, UCLA Semiconductor Research Corporation (SRC) Summer Research Program [Summer 2019]
- **Coordinator**, UCLA Summer Bridge Review for Enhancing Engineering Students (BREES) [Summer 2018]
- **Mentor**, Engineering 87 (E87) – Introduction to Engineering Disciplines, UCLA Center for Excellence in Engineering Diversity (CEED) [Fall 2017]
- **Mentor**, Sankofa Academy Mentor Moments Program for 6<sup>th</sup> – 8<sup>th</sup> grade, Oakland CA [Spring 2017]
- **Mentor**, Chevron E-Bike Volunteer at Richmond High School, Richmond, CA [February – April, 2014]
- **Tutor**, Citizens Schools Volunteer for 6<sup>th</sup> and 7<sup>th</sup> grade at United for Success Academy, Oakland, CA [February – April, 2013]