

ZHENMING WANG

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EDUCATION

Doctor of Philosophy, Geophysics, University of Kentucky - 1998
Master of Science, Environmental Engineering, University of Kentucky - 1998
Bachelor of Science, Geotechnical Engineering, University of Kentucky - 1996
Master of Science, Geophysics, University of Kentucky - 1993
Bachelor of Science, Geology, Peking University (Beijing, China) - 1982

EXPERIENCE

Registration: Professional Engineer (PE), Commonwealth of Kentucky, License No. 23823

Work

2025 to present **Associate Director**, Kentucky Geological Survey, University of Kentucky,
Lexington, Kentucky
2015 to present **Adjunct Associate Professor**, Department of Earth and Environmental Sciences,
University of Kentucky, Lexington, Kentucky
2006 to 2025 **Head**, *Geologic Hazards Section, Kentucky Geological Survey, University of Kentucky,*
Lexington, Kentucky
2011 to 2020 **Adjunct Research Professor**, Institute of Crustal Dynamics, China Earthquake
Administration, Beijing, China
2002 to 2014 **Adjunct Assistant Professor**, Department of Earth and Environmental Sciences,
University of Kentucky, Lexington, Kentucky
2004 to 2006 **Manager (Geologist V)**, Geologic Hazards Section, Kentucky Geological Survey,
University of Kentucky, Lexington, Kentucky
2001 to 2004 **Geologist IV**, Geologic Hazards Section, Kentucky Geological Survey, University of
Kentucky, Lexington, Kentucky
2000 to 2001 **Acting Director**, Earthquake and Landslide Program, Oregon Department of Geology
and Mineral Industries, Portland, Oregon
2000 to 2001 **Adjunct Assistant Professor**, Department of Civil and Environmental Engineering,
University of Portland, Portland, Oregon
1997 to 2000 **Earthquake Geotechnical Specialist**, Oregon Department of Geology and Mineral
Industries, Portland, Oregon
1991 to 1997 **Research Assistant**, Department of Geological Sciences/Kentucky Geological
Survey/Kentucky Transportation Research Center/Center for Computational Sciences,
University of Kentucky, Lexington, Kentucky
1987 to 1991 **Head (Engineer), Geophysics Group**, Fujian Earthquake Administration, Fuzhou,
Fujian, China
1982 to 1987 **Assistant Engineer**, Fujian Earthquake Administration, Fuzhou, Fujian, China

Teaching

Department of Earth and Environmental Sciences, University of Kentucky – Lexington, Kentucky
Fall 2005, 2015, Spring 2010, 2011, 2013, 2014, 2018, 2020

Course: GLY-625/EES-675 – Earthquake Seismology

Department of Earth and Environmental Sciences, University of Kentucky – Lexington, Kentucky

Spring 2006 and Fall 2009

Course: Independent Study – Earthquake Seismology

Department of Geological Sciences, University of Kentucky – Lexington, Kentucky

Spring 2004

Course: GLY782 – Individual Work in Geology (Seismology)

Department of Geological Sciences, University of Kentucky – Lexington, Kentucky

Fall 2003

Course: GLY560 – Engineering Seismology (Co-teach)

Department of Civil and Environmental Engineering, University of Portland – Portland, Oregon

Fall 2000

Course: CE452 – Geotechnical Earthquake Engineering

Post-Doctoral Advising

Caibo Hu (2011-2012), Peking University, Beijing, China

Graduate Student Advising and Committee Services

Seth Thompson, M.S. Thesis (2026), Department of Earth and Environmental Sciences

Stephanie Vicroy, M.S. Thesis (2024), Department of Earth and Environmental Sciences

Russel Rogers, M.S. Thesis (2023), Department of Earth and Environmental Sciences

Cooper Cearley, M.S. Thesis (2021), Department of Earth and Environmental Sciences

Leif Johnson, Ph.D. Dissertation (2021), Department of Geography (Outside Examiner)

Xiaohang Yu, Ph.D. Dissertation (2020), School of Music

Eric Michael-Robsky Huntley, Ph.D. Dissertation (2020), Department of Geography (Outside Examiner)

Seth Carpenter, Ph.D. Dissertation (2019), Department of Earth and Environmental Sciences

Wisam Muttashar, Ph.D. Dissertation (2019), Department of Earth and Environmental Sciences

Drew Burford, M.S. Thesis (2019), Department of Earth and Environmental Sciences

Brooks Rosandich, M.S. Thesis (2019), Department of Earth and Environmental Sciences

Matthew Crawford, Ph.D. Dissertation (2018), Department of Earth and Environmental Sciences

Clara Tucker, M.S. Thesis (2017), Department of Earth and Environmental Sciences

Andrew Holcomb, M.S. Thesis (2017), Department of Earth and Environmental Sciences

Paul Rodriguez Asihama, M.S. Thesis (2016), Department of Earth and Environmental Sciences

Mianshui, Rong, Ph.D. Dissertation (2015), Institute of Crustal Dynamics, Beijing, China

Christopher Warren Van Dyke, Ph.D. Dissertation (2015), Department of Geography (Outside Examiner)

Corey Burkett, M.S. Thesis (2014), Department of Earth and Environmental Sciences

Mahnaz Sepehrmanesh, M.S. Thesis (2014), Department of Earth and Environmental Sciences

Clayton Brengman, M.S. Thesis (2014), Department of Earth and Environmental Sciences

Alice Orton, M.S. Thesis (2014), Department of Earth and Environmental Sciences

Ali Almayahi, Ph.D. Dissertation (2013), Department of Earth and Environmental Sciences

Jiwei Feng, M.S. Thesis (2013), Institute of Engineering Mechanics, Harbin, China

Carrington Wright, M.S. Thesis (2012), Department of Earth and Environmental Sciences

Jamin Frommel, M.S. Thesis (2012), Department of Earth and Environmental Sciences

Elizabeth Coyle, Ph.D. Dissertation (2011), Department of Civil Engineering

Shoba Gowda, M.S. Thesis (2011), Department of Earth and Environmental Sciences

Jingwei Liu, Ph.D. Dissertation (2011), Institute of Crustal Dynamics, Beijing, China

David Butler, M.S. Thesis (2011), Department of Earth and Environmental Sciences

Anthony Paschall, M.S. Thesis (2011), Department of Earth and Environmental Sciences

Daniel Hunter, M.S. Thesis (2011), Department of Earth and Environmental Sciences

Kenneth A. Macpherson, Ph.D. Dissertation (2009), Department of Earth and Environmental Sciences

Jonathan L. McIntyre, M.S. Thesis (2008), Department of Earth and Environmental Sciences

Cora Anderson, M.S. Thesis (2008), Department of Earth and Environmental Sciences
James Whitt, M.S. Thesis (2007), Department of Earth and Environmental Sciences
David Vance, M.S. Thesis (2006), Department of Earth and Environmental Sciences
Yosep Erwin Supranata, Ph.D. Dissertation (2006), Department of Civil Engineering
William Reid, M.S. Thesis (2005), Department of Geological Sciences
Frederick Rutledge, M.S. Thesis (2004), Department of Geological Sciences
Ting-Li Lin, M.S. Thesis (2003), Department of Geological Sciences

Undergraduate Student Advising

Andrew Holcomb (2013), Department of Earth and Environmental Sciences
Eric Altobellis (2012), Department of Earth and Environmental Sciences
Catherine Burton (2012), Department of Earth and Environmental Sciences
Cora Anderson (2006), Department of Earth and Environmental Sciences
David Vance (2001-2004), Department of Geological Sciences

High School Student Advising

Elizabeth Gordan (2021), Paul Laurence Dunbar High School, Lexington, Kentucky
Kyle Combs (2015-2016), Paul Laurence Dunbar High School, Lexington, Kentucky

PUBLICATIONS (past 5 years)

Peer-Reviewed

Carpenter, N.S., Wang, Z., and Woolery, E.W., 2023, Linear Site-Response Characteristics at Central and Eastern U.S. Seismic Stations, *Frontiers in Earth Science* 11:1216467, doi:10.3389/feart.2023.1216467.

Wang, Z., and Carpenter, N.S., 2023, Linear Site Responses from U.S. Borehole Arrays: Primary Site-Response Parameters and Proxies, *Soil Dynamics and Earthquake Engineering*, 164: 107578 (16 p), doi:10.1016/j.soildyn.2022.107578.

Crawford, M.M., Dortch, J.M., Koch, H.J., Zhu, Y., Haneberg, W.C., Wang, Z., and Bryson, L.S., 2022, Landslide Risk Assessment in Eastern Kentucky, USA: Developing a Regional Scale, Limited Resource Approach, *Remote Sensing*, 14, 6246 (22 p), doi:10.3390/rs14246246.

Zhu, Y., Wang, Z., Carpenter, N.S., Woolery, E.W., and Haneberg, W.C., 2021, Mapping fundamental-mode site periods and amplifications from thick sediments: An example from the Jackson Purchase Region of western Kentucky, central United States, *Bulletin of Seismological Society of America*, 111, 1868–1884, doi:10.1785/0120200300.

Wang, Q., Wang, Z., Su, Y., Zhong, X., Wang, L., Ma, H., Zhang, G., Woolery, E.W., and Liu, K., 2021, Characteristics and mechanism of the landslide in Yongguang Village, Minxian County, China, *Natural Hazards*, 105: 1413–1438, doi:10.1007/s11069-020-04360-7.

Carpenter, N.S., Holcomb, A.S., Woolery, E.W., Wang, Z., Hickman, J.B., and Roche, S.L., 2020, Natural seismicity in and around the Rome Trough, Eastern Kentucky, from a temporary seismic network, *Seismological Research Letters*, 91: 1831–1845, doi:10.1785/0220190015.

Miao, F., Carpenter, N.S., Wang, Z., Holcomb, A.S., Woolery, E.W., 2020, High-accuracy discrimination of blasts and earthquakes using neural networks with multi-window spectral data, *Seismological Research Letters*, 91: 1646–1659, doi:10.1785/0220190084.

Carpenter, N.S., Wang, Z., Woolery, E.W., 2020, An evaluation of linear site-response parameters in the central and eastern United States and the importance of empirical site-response estimations, *Bulletin of Seismological Society of America*, 110: 489–507, doi:10.1785/0120190217.

Peng, Y., Wang, Z., Woolery, E.W., Lyu, Y., Carpenter, N.S., Fang, Y., and Huang, S., 2020, Ground-motion site effect in the Beijing metropolitan area, *Engineering Geology*, 266 (2020) 105395, doi:10.1016/j.enggeo.2019.105395.

Proceedings and Book Contributions

Wang, Z., and Carpenter, N.S., 2025, Assessing Seismic Hazards for Engineering Design and Other Applications in Kentucky, *Proceedings of the Geotechnical Frontiers 2025*, GSP 366: p. 409-418.

Zhu, Y., Carpenter, S., Miller, A.C., Wang, H., and Wang, Z., 2025, Modeling Spatial Variability of Ground-Motion Site Resonances for the Jackson Purchase Region in the New Madrid Seismic Zone, *Proceedings of the Geotechnical Frontiers 2025*, GSP 368: p. 65-74.

Wang, Z., Carpenter, N.S., and Woolery, E.W., 2023, Earthquake Ground-Motion Site Response in the Central United States: Issue and Progress, *Proceedings of the 53rd Ohio River Valley Soils Seminar (ORVSS LIII)*, November 8, 2023, Louisville, Kentucky, 12 p.

Wong, I.G., Carpenter, N.S., Kelley, M.E., Bubeck, A.A., Schmidt, J.P., Wu, Q., Wang, Z., Greb. S.F., Sparks, T.N., and Lewandowski, 2022, Toward large-scale characterization of induced seismicity potential and its impacts for CCUS in the central and eastern U.S., *Proceedings of the 16th International Conference on Greenhouse Gas Control Technologies GHGT-16*, 23-27th October 2022, Lyon, France (12p).

Wang, Z., Carpenter, N.S., and Woolery, E.W., 2022, Chapter 17 - Scenario-based seismic hazard analysis and its application in the central United States, in Panza G., Kossobokov V. G., Laor E. and De Vivo B., eds, *Earthquake and Sustainable Infrastructure*, p. 349–371, doi:10.1016/B978-0-12-823503-4.00035-X (Elsevier).

Major Reports and Expanded Abstracts

Wang, Z., and Carpenter, S., 2024, Assessing Seismic Hazard in Western Kentucky and at the Paducah Gaseous Diffusion Plant: An Overview of the Issues, Mitigation Strategies, and the Research Conducted by the Kentucky Geological Survey, Kentucky Geological Survey, ser. 13, Bulletin 1, 100p, doi.org/10.13023/kgs.bn.13.1.

Kalinski, K.E, and Z. Wang, 2024, Acquisition of Strong Ground Motion Data in the New Madrid Seismic Zone Using Inexpensive Novel Instrumentation, **Report to the United States Geological Survey**, NEHRP Award G22AP00049, 15p.

Crawford, M., Wang, Z., Carpenter, N.S., Schmidt, J., Koch, K., and Dortch, J., 2023, Reconnaissance of landslides and debris flows associated with the July 2022 Flooding in Eastern Kentucky, Kentucky Geological Survey, ser. 13, **Report of Investigations 12**, 14p, doi.org/10.13023/kgs.ri56.13.

Carpenter, N.S., Wang, Z., and Woolery, E.W., 2021, Improving Estimates of Ground-Motion Site Response in the New Madrid and Wabash Valley Seismic Zones, **Final Technical Report to the United States Geological Survey**, NEHRP Award No. G20AP00018, 32p.

Street, R.L., Wang, Z., Carpenter, N.S., and Woolery, E.W., 2021, The Kentucky Seismic and Strong Motion Network: History, Service, and Research, Kentucky Geological Survey, ser. 13, **Special Publication 1**, 18p.

Wang, Z., Carpenter, N.S., and Woolery, E.W., 2020, An update of seismic monitoring and research in the vicinity of the Paducah Gaseous Diffusion Plant: January 2018–December 2019, Kentucky Geological Survey, ser. 13, **Report of Investigations 12**, 21p., doi.org/10.13023/kgs.ri12.13.

Crawford, M.M., Bryson, L.S., Wang, Z., and Woolery, E.W., 2020, Geologic characterization, hydrologic monitoring, and soil-water relationships for landslides in Kentucky, Kentucky Geological Survey, ser. 13, **Report of Investigations 11**, 27p., doi.org/10.13023/kgs.ri11.13.

Abstracts

Carpenter, S., and Wang, Z., 2025, Identifying Site Resonance in the Central and Eastern U.S. Using HVSr: Insights from Ambient-noise and Earthquake S-wave Energy Sources and Implications for Site Characterizations, the SSA 2025 Annual Meeting, 14– 18 April 2025, Baltimore, MD.

Schmidt, J. P., Carpenter, S., Wang, Z., 2025, Event Detection and Hypocenter Uncertainty Analysis of Induced Earthquakes the Rome Trough, West Virginia, the SSA 2025 Annual Meeting, 14– 18 April 2025, Baltimore, MD.

Thompson, S. C., Carpenter, S., Wang, Z., 2025, Exploring Possible Tornado Seismic Signals from the December 10-11, 2021, Tornado Outbreak in the Central U.S., the SSA 2025 Annual Meeting, 14– 18 April 2025, Baltimore, MD.

Carpenter, S., Rodriguez Cardozo, F. R., Schmidt, J. P., Braunmiller, J., Woolery, E. W., Wang, Z., 2025, Cost-effective Groundwater Monitoring Using Nodal Geophones: Updates from a Case Study in the Upper Mississippi Embayment, the SSA 2025 Annual Meeting, 14– 18 April 2025, Baltimore, MD.

Wang, Z., and Carpenter, N.S., 2024, Science for Policy: A Case from Earthquake Science to Mitigation Policy in the New Madrid Seismic Zone of the Central United States, the 2024 AGU Fall Meeting, December 9-13, 2024, Washington D.C.

Wang, Z., and Carpenter, N.S., 2024, Challenges with Probabilistic Seismic Hazard Analysis (PSHA) in the Central United States, the 2024 AGU Fall Meeting, December 9-13, 2024, Washington D.C.

Carpenter, N.S., and Wang, Z., 2024, Identifying Site Resonance Using HVSr: Insights from Ambient-Noise and Earthquake S-wave Energy Sources, the 2024 AGU Fall Meeting, December 9-13, 2024, Washington D.C.

Carpenter, N.S., Rodriguez Cardozo, F., Woolery, E.W., Schmidt, J.P., Braunmiller, J., and Wang, Z., 2024, 4-D Passive Aquifer Characterization in the Upper Mississippi Embayment with Nodal Geophones: Background and Instrument Evaluation, the 2024 AGU Fall Meeting, December 9-13, 2024, Washington D.C.

Wang, Z., and Carpenter, N.S., 2024, The 5 April 2024 Whitehouse Station, New Jersey Earthquake (Mw 4.8): Implications for Seismic Hazard Assessment and Communication in the Central and Eastern U.S., the Eastern Section SSA 2022 Annual Meeting, 21-22 October 2024, Atlanta, GA.

Wang, Z., and Carpenter, N.S., 2024. Landfill Design Ground Motion at the Paducah Gaseous Diffusion

Plant (Central United States), the SSA 2024 Annual Meeting, 29 April – 3 May 2024, Anchorage, AK.

Carpenter, N.S., and Wang, Z., 2024. Scenario-based Seismic Hazard Assessment for the Jackson Purchase Region (Upper Mississippi Embayment) Incorporating Site-Specific Vs Profiles, the SSA 2024 Annual Meeting, 29 April – 3 May 2024, Anchorage, AK.

Schmidt, J.P., Carpenter, N.S., Wang, Z., and Kalinski, M., 2024. Performance of Raspberry Shake vs. Kentucky regional seismic network instruments near New Madrid Seismic Zone, the SSA 2024 Annual Meeting, 29 April – 3 May 2024, Anchorage, AK.

Rogers, R.C., Carpenter, N.S., Wang, Z., Woolery, E.W., 2023, Estimating Bedrock Shear-Wave Velocity at VSAP (Upper Mississippi Embayment) Using Nodal Array Recordings of Ambient Noise, the 2023 CEUS/Coastal Plain Earthquake Ground Motions Virtual Workshop, December 7-8, 2023.

Wang, Z. and Carpenter, N.S., 2023. Physical and Empirical Site Response Analyses at Selected Borehole Strong-Motion Arrays from the United States and Japan, SSA Future Directions: Physics-based ground motion modeling, October 10-13, 2023, Vancouver, BC.

Wang, Z. and Carpenter, N.S., 2023. Site Characterizations and Linear Site Responses at Selected Borehole Strong-Motion Arrays from the United States and Japan, the SSA 2023 Annual Meeting, 17-20 April 2023, San Juan, Puerto Rico. Seismological Research Letters, 94 (2B), p. 1201-1202.

Wang, Z. and Carpenter, N.S., 2023. Are There Unique Parameters and Proxies for Predicting Site Response? Examples From Selected Borehole Strong Motion Arrays, the SSA 2023 Annual Meeting, 17-20 April 2023, San Juan, Puerto Rico. Seismological Research Letters, 94 (2B), p. 1264.

Carpenter, N.S., Bubeck, A., Hickman, J.B, Schmidt, J.P., and Wang, Z., 2023. Seismic Quiescence in the Rome Trough: Implications for Earthquake Potential and Crustal Structure, the SSA 2023 Annual Meeting, 17-20 April 2023, San Juan, Puerto Rico. Seismological Research Letters, 94 (2B), p. 1279.

Carpenter, N.S. and Wang, Z., 2023. The Influence of Impedance-Ratio Distributions on 1D Linear Site Response Proxies, the SSA 2023 Annual Meeting, 17-20 April 2023, San Juan, Puerto Rico. Seismological Research Letters, 94 (2B), p. 1290.

Schmidt, J.P., Carpenter, N.S., and Wang, Z., 2023. Classifying Central and Eastern U.S. Seismic Events in the Earthscope Database Using Machine Learning and Lg-Wave Spectral Ratios, the SSA 2023 Annual Meeting, 17-20 April 2023, San Juan, Puerto Rico. Seismological Research Letters, 94 (2B), p. 1243.

Carpenter, N.S., Wang, Z., 2022, Impedance Ratios as Predictors of Primary Ground-motion Site Response Characteristics at Central and Eastern U.S. Seismic Stations, the Eastern Section SSA 2022 Annual Meeting, 23-25 October 2022, Tampa, Florida.

Schmidt, J.P., Carpenter, N.S., and Wang, Z., 2022, Classifying Seismic Events Located in the North-central and Northeastern United States by EarthScope's Array Network Facility Using Machine Learning, the Eastern Section SSA 2022 Annual Meeting, 23-25 October 2022, Tampa, Florida.

Rogers, R.C., Carpenter, N.S., and Wang, Z., Fundamental Site Resonance Frequencies in the Upper Mississippi Embayment from Ambient Noise HVSr Using 5 Hz Nodal Geophones, the Eastern Section SSA 2022 Annual Meeting, 23-25 October 2022, Tampa, Florida.

Wang, Z., and Carpenter, N.S., 2022, What Are the Primary Site Response Parameters and Proxies?, the

SSA 2022 Annual Meeting, 19-23 April 2022, Bellevue, WA.

Wang, Z., Carpenter, N.S., and Zhu, Y., 2022, Geospatial Mapping of Seismic Hazards: An Example of Site Amplification Mapping in the New Madrid Seismic Zone of Central United States, the SSA 2022 Annual Meeting, 19-23 April 2022, Bellevue, WA.

Carpenter, N.S., Schmidt, J.P., and Wang, Z., 2022, Developing a Baseline Seismicity Catalog in the North-Central and Northeastern U.S. to Assist with CCUS Deployment, GSA North-Central/Southeastern Section Meeting – 2022, 7–8 April 2022, Cincinnati, OH.

Carpenter, N.S., Hickman, J.B., Brudzinski, M.R., Schmidt, J.P., and Wang, Z., 2022, The Rome Trough: A seismically quiescent intraplate rift bounding active seismic zone, GSA North-Central/Southeastern Section Meeting – 2022, 7–8 April 2022, Cincinnati, OH.

Wang, Z., and Carpenter, N.S., 2021, Characteristics of Nonlinear Site Response from Borehole Strong-Motion Recordings, **the Eastern Section SSA 2021 Annual Meeting**, 18-22 October 2021 (virtual).

Schmidt, J.P., Carpenter, N.S., and Wang, Z., 2021, Leveraging machine learning algorithms to efficiently identify events in eastern Kentucky, **the Eastern Section SSA 2021 Annual Meeting**, 18-22 October 2021 (virtual).

Carpenter, N.S., Hickman, J.B., Schmidt, J.P., Wang, Z., 2021, The Rome Trough: A Seismically Quiescent Intraplate Rift, **the Eastern Section SSA 2021 Annual Meeting**, 18-22 October 2021 (virtual).

Wang, Z., and Carpenter, N.S., 2021, Primary Linear Site Response Parameters from Transfer Functions and Ratios of Response Spectra, **the SSA 2021 Annual Meeting**, 19-20 April 2021.

Carpenter, N.S., Wang, Z., Zhu, Y., and Woolery, E.W., 2021, Should Site Response Be Incorporated Into Central U.S. Hazard Maps?, **the SSA 2021 Annual Meeting**, 19-20 April 2021.

Carpenter, N.S., Yassminh, R., Hickman, J.B., and Wang, Z., 2021, Site Response in the Illinois Basin From S-Wave H/V and Spectral-Element Modeling, **the SSA 2021 Annual Meeting**, 19-20 April 2021.

Schmidt, J.P. Carpenter, N.S., and Wang, Z., Seismic Noise Tests in Mammoth Cave, USA, **the SSA 2021 Annual Meeting**, 19-20 April 2021.

Wang, Z., and Carpenter, N.S., 2020, Assessing Primary Ground-Motion Site-Response Parameters from Borehole-Array Records, **the 2020 AGU Fall Meeting**, December 1-17, 2020, San Francisco, CA

Carpenter, N.S., Yassminh, R., Hickman, J.B., and Wang, Z., Site Response from Deep Rock Layers in the Illinois Basin from S-wave H/V and Spectral-element Modeling, **the 2020 AGU Fall Meeting, December 1-17, 2020**, San Francisco, CA

Schmidt, J.P., Carpenter, N.S., and Wang, Z., 2020, Linear and nonlinear site response from S-wave HVSR: Observations in the New Madrid Seismic Zone and from the Ridgecrest earthquake sequence, **the 2020 AGU Fall Meeting**, December 1-17, 2020, San Francisco, CA

Wang, Z., Carpenter, N.S., Woolery, E.W., and Kalinski, M.E., 2020, New Site Correction Factors and Design Response Spectrum: Their Applications in the Central United States, **the Eastern Section SSA 2020 Annual Meeting**, 12-16 October 2020, Atlanta, GA.

Carpenter, N.S., Wang, Z., and Woolery, E.W., 2020, Proxies May Not Adequately Approximate Site Resonance, **the Eastern Section SSA 2020 Annual Meeting**, 12-16 October 2020, Atlanta, GA.

Carpenter, N.S., Wang, Z., and Woolery, E.W., 2020, Primary Site-Response Parameters and an Evaluation of Site-Response Proxies at Selected Sites in the Upper Mississippi Embayment, the 2020 USGS Coastal Plain Amplification Virtual Workshop, October 5 and 7, 2020.

Wang, Z., Carpenter, N.S., Woolery, E.W., and Kalinski, M.E., 2020, Ground-Motion Site Response and New Physics-Based Site Correction Factors for Design Response Spectrum, **the SSA 2020 Annual Meeting**, 27-30 April 2020, Albuquerque, NM.

Zhu, Y., Wang, Z., Carpenter, N.S., Woolery, E.W., and Haneberg, W.C., 2020, Fundamental Site Period and Peak Amplification Maps for the Jackson Purchase Region in the New Madrid Seismic Zone, **the SSA 2020 Annual Meeting**, 27-30 April 2020, Albuquerque, NM.

Carpenter, N.S., Wang, Z., and Woolery, E.W., 2020, Should Site Response Be Incorporated into Central and Eastern US Hazard Maps?, **the SSA 2020 Annual Meeting**, 27-30 April 2020, Albuquerque, NM.

Carpenter, N.S., Wang, Z., Woolery, E.W., and Hickman, J.B., 2020, Does the eastern Kentucky Rome Trough interrupt or bound the Eastern Tennessee Seismic Zone?, **the SSA 2020 Annual Meeting**, 27-30 April 2020, Albuquerque, NM.

PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU)
Seismological Society of America (SSA)

FUNDED PROJECTS (past 5 years)

Co-PI Kentucky Research Consortium for Energy and Environment (KRCEE), **U.S. Department of Energy**, \$1,743,348, April 2016 – March 2024

Co-PI Acquisition of Earthquake Ground Motion Data in the New Madrid Seismic Zone Using Inexpensive Novel Instrumentation, **USGS NEHRP Program** Award G22AP00049, \$59,230, January – December 2023.

Co-PI Improving Estimates of Ground-Motion Site Response in the New Madrid and Wabash Valley Seismic Zones, **USGS NEHRP Program** Award G20AP00018, \$64,462, January 2020 – June 2021