

Edward W. Woolery

University of Kentucky
Department of Earth and Environmental Sciences
Lexington, KY 40506-0053

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FAX: 859.323.1938
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Education:

University of Kentucky	Geological Sciences (Geophysics)	PhD	1998
University of Kentucky	Geological Sciences (Geophysics)	MS	1993
University of Kentucky	Civil Engineering	BSCE	1996
Eastern Kentucky University	Geology	BS	1985

Appointments:

Professor, *University of Kentucky (2014–present)*
Associate Professor, *University of Kentucky (2007–2014)*
Assistant Professor, *University of Kentucky (2001–2007)*
Visiting Research Fellow, *Institute of Crustal Dynamics, China Earthquake Admin. (2011–2016)*
Geophysics Faculty Associate, *Kentucky Geological Survey (2001–present)*
Adjunct Assistant Professor, *University of Kentucky (1999–2001)*
Research Geophysicist (Geologist IV), *Kentucky Geological Survey (1998–2001)*
Chief Geologist, *U.S. Army Corps of Engineers, Louisville District (1997–1998)*
Civil Engineer (Geotechnical), *U.S. Army Corps of Engineers, Louisville District (1996–1998)*
Research/Teaching Assistant, *University of Kentucky (1991–1996)*
Geologist, *U.S. Army Corps of Engineers, Louisville District (1986–1991)*
Physical Scientist, *Defense Mapping Agency (1985–1986)*

Courses Taught: († Course Development)

University of Kentucky – Department of Earth and Environmental Sciences

EES 550 – Fundamental Geophysics†
EES 150 – Earthquakes and Volcanoes
EES 155 – Earthquakes and Quantitative Reasoning†
EES 560 – Geophysical Field Methods†
EES 670 – Exploration Seismology†
EES 675 – Earthquake Seismology†
EES 625 – Topics in Geophysics: Paleoseismology†
EES 625 – Topics in Geophysics: Engineering Geology†
EES 625 – Topics in Geophysics: Glacial and Quaternary Geology† (co-taught and developed)

University of Kentucky – Department of Civil Engineering

CE 471G – Soil Mechanics
CE 679 – Geotechnical Earthquake Engineering

Graduate Advisory Committee Chair: (*completed)

(27) Brooks Rosandich, M.S., 2017, (26) Drew Burford, M.S., 2017, (25) *Clara Rose, M.S., 2015, (24) *Andrew Holcomb, M.S., 2015, (23) *Paul Rodriguez Asihama, M.S., 2014, (22) *Marie Cooper, M.S., 2014, (21) Wissam Mutasher, Ph.D. 2014 (Qualifying Exam), (20) Seth Carpenter, Ph.D. 2013 (Qualifying Exam), (19) *Clayton Brengman, M.S. 2012, (18) *Alice Orton, M.S. 2012, (17) *Carrington Wright, M.S. 2011, (16) Matthew Crawford, Ph.D. 2010, (15) *Ali Al-Mayahi, Ph.D. 2010, (14) *Jamin Frommel, M.S. 2010, (13) *Shoba Gowda, M.S. 2010, (12) *David Butler, M.S. 2009, (11) *Anthony Paschall, M.S. 2009, (10) *Daniel Hunter, M.S. 2008, (9) *Bethany Overfield, M.S. 2007, (8) *Kenneth Macpherson, Ph.D. 2006, (7) *Cora Anderson, M.S. 2006, (6) *Jonathan McIntyre, M.S. 2006, (5) *James Whitt, M.S. 2005, (4) *David Vance, M.S. 2004, (3) *Frederick Rutledge, M.S. 2002, (2) *William Reid, M.S. 2002, (1) *Ting-Li Lin, M.S. 2001

Graduate Advisory Committee Member: (*completed)

- (80) Edward Lo, Ph.D., 2018, *Department of Earth and Environmental Sciences*
- (79) Faisal Ahmed, Ph.D., 2018, *Department of Civil Engineering*
- (78) Leah Newman, M.S., 2017, *Department of Earth and Environmental Sciences*
- (77) Antonia Bottoms, M.S., 2017, *Department of Earth and Environmental Sciences*
- (76) Eva Lyons, Ph.D., 2017, *Department of Earth and Environmental Sciences*
- (75) Laura Streib, M.S., 2017, *Department of Earth and Environmental Sciences*
- (74) Harrison Donaghy*, M.S., 2017, *Department of Civil Engineering*
- (73) Majid Mahmoodabadi, Ph.D., 2017, *Department of Civil Engineering*
- (72) Joseph Lucas, M.S., 2013, *Department of Earth and Environmental Sciences*
- (71) Rachel Durham*, M.S., 2015, *Department of Earth and Environmental Sciences*
- (70) Zachary Perlman*, M.S., 2015, *Department of Earth and Environmental Sciences*
- (69) Patrick Ryan*, M.S., 2015, *Department of Earth and Environmental Sciences*
- (68) Rachel Adams*, M.S., 2015, *Department of Civil Engineering*
- (67) Sekyi Intsiful*, M.S., 2015, *Department of Civil Engineering*
- (66) Anne Fendick*, M.S., 2014, *Department of Earth and Environmental Sciences*
- (65) Kade Carlson*, M.S., 2014, *Department of Earth and Environmental Sciences*
- (64) Ann Hislop, Ph.D., 2014, *Department of Earth and Environmental Sciences*
- (63) Patrick Baldwin*, M.S., 2014, *Department of Earth and Environmental Sciences*
- (62) Ryan Ortiz*, M.S., 2015, *Department of Civil Engineering*
- (61) Xu Zhang*, M.S., 2014, *Department of Civil Engineering*
- (60) Joshua Wells*, M.S., 2014, *Department of Civil Engineering*
- (59) Ann Harris, Ph.D., 2014, *Department of Earth and Environmental Sciences*
- (58) Corey Burkett*, M.S., 2013, *Department of Earth and Environmental Sciences*
- (57) Elliot Magoto*, M.S., 2013, *Department of Civil Engineering*
- (56) Melinda Jean-Louis*, M.S., 2013, *Department of Civil Engineering*
- (55) Zachary Moore*, M.S., 2013, *Department of Earth and Environmental Sciences*
- (54) Stephen Prosser*, M.S., 2013, *Department of Earth and Environmental Sciences*
- (53) Jason Hartell*, Ph.D., 2014, *Department of Agriculture Economics (Outside Examiner)*
- (52) Julie Floyd*, M.S., 2013, *Department of Earth and Environmental Sciences*
- (51) Dibya Koirala, Ph.D., 2013, *Department of Earth and Environmental Sciences*
- (50) Kirk Jenkins*, M.S., 2013, *Department of Civil Engineering*
- (49) Bhamidipati Raghava*, Ph.D., 2013, *Department of Civil Engineering*
- (48) Sleem Kreba*, Ph.D., 2013, *Department of Soil Science (Outside Examiner)*
- (47) Jason Curd*, M.S., 2013, *Department of Civil Engineering*
- (46) Le Cao*, M.S., 2013, *Department of Civil Engineering*
- (45) Jordan Kirkendoll*, M.S., 2013, *Department of Civil Engineering*
- (44) Sara Federschmidt*, M.S., 2012, *Department of Earth and Environmental Sciences*
- (43) Philip Wolf*, M.S., 2012, *Department of Earth and Environmental Sciences*
- (42) Bhamidipati Raghava*, M.S., 2012, *Department of Civil Engineering*
- (41) Brock Kidd*, M.S., 2011, *Department of Civil Engineering*
- (40) Derrick Dennison*, M.S., 2011, *Department of Civil Engineering*
- (39) Taylor Taluski*, M.S., 2011, *Department of Civil Engineering*
- (38) Eric Anderson*, Ph.D., 2011, *Department of Earth and Environmental Sciences*
- (37) Cosmas Kuijo, Ph.D., 2011, *Department of Earth and Environmental Sciences*
- (36) Mahnaz Sepehrmanesh*, M.S., 2011, *Department of Earth and Environmental Sciences*
- (35) Melissa Ditty*, M.S., 2011, *Department of Earth and Environmental Sciences*
- (34) Bryan Embry*, M.S., 2011, *Department of Civil Engineering*
- (33) Christian Wilder*, M.S., 2011, *Department of Civil Engineering*
- (32) Forrest Webb, M.S., 2011, *Department of Earth and Environmental Sciences*
- (31) Ganesh Tripathi*, Ph.D., 2011, *Department of Earth and Environmental Sciences*
- (30) Bradley Rister, Ph.D., 2011, *Department of Civil Engineering*
- (29) Corrie Walton-Macaulay*, Ph.D., 2011, *Department of Civil Engineering*
- (28) Alfred Susilo, Ph.D., 2011, *Department of Civil Engineering*
- (27) Jonathan Huff*, M.S., 2010, *Department of Civil Engineering*
- (26) Christopher Jones*, M.S., 2010, *Department of Civil Engineering*
- (25) Ashley Gilbert*, M.S., 2010, *Department of Earth and Environmental Sciences*

- (24) Susmitha Nambuthiri*, Ph.D., 2009, *Department of Soil Science (Outside Examiner)*
- (23) Ali Salehian*, Ph.D., 2009, *Department of Civil Engineering*
- (22) Elizabeth Dodson*, M.S., 2009, *Department of Earth and Environmental Sciences*
- (21) Ganesh Tripathi*, M.S., 2008, *Department of Earth and Environmental Sciences*
- (20) Lauren Little*, M.S., 2007, *Department of Civil Engineering*
- (19) Elizabeth Mayo*, Ph.D., 2007, *Department of Physics (Outside Examiner)*
- (18) Andrew Lageman*, M.S., 2006, *Department of Civil Engineering*
- (17) John Allen*, Ph.D., 2006, *Department of Earth and Environmental Sciences*
- (16) Brian Cook*, Ph.D., 2006, *Department of Earth and Environmental Sciences*
- (15) Aaron Rosenstiel*, M.S., 2006, *Department of Civil Engineering*
- (14) Tanmay Singhal*, M.S., 2006, *Department of Mechanical Engineering*
- (13) Yuang Peng*, Ph.D., 2005, *Department of Civil Engineering (Outside Examiner)*
- (12) Erwin Supranata*, Ph.D., 2004, *Department of Civil Engineering*
- (11) Joshua Sexton*, M.S., 2004, *Department of Geological Sciences*
- (10) John Hickman*, Ph.D., 2004, *Department of Geological Sciences*
- (9) Madhusudhana Reddy Thummaluru*, M.S., 2003, *Department of Civil Engineering*
- (8) Jaydip Gosh, Ph.D., 2003, *Department of Geological Sciences*
- (7) Bei Su*, Ph.D., 2002, *Department of Civil Engineering*
- (6) Donald Surles*, Ph.D., 2002, *Department of Geological Sciences*
- (5) Tina White, M.S., 2001, *Department of Geological Sciences*
- (4) Steven Juszczuk*, Ph.D., 2001, *Department of Geological Sciences*
- (3) Gary McDowell*, M.S., 2000, *Department of Geological Sciences*
- (2) Steven Wood*, M.S., 2000, *Department of Geological Sciences*
- (1) Seth Berman*, M.S., 1999, *Department of Geological Sciences*

Post-Doctoral/Visiting Scholar Sponsor:

- (8) Gengqing Zhu, Visiting Scholar (Geophysics) 2014, Earthquake Administration of Fujian Province
- (7) Caibo Hu, Post-Doctoral Scholar (Geophysics) 2012, Peking University
- (6) Jiwei Feng, Visiting Scholar (Seismology) 2012-13, Inst. of Engineering Mechanics-China Earthquake Admin.
- (5) Yi Du, Visiting Scholar (Neotectonics) 2012, Institute of Crustal Dynamics-China Earthquake Admin.
- (4) Xugeng Chen, Visiting Scholar (Geophysics) 2011, Institute of Crustal Dynamics-China Earthquake Admin.
- (3) Jingwei Liu, Visiting Scholar (Geophysics) 2010, Institute of Crustal Dynamics-China Earthquake Admin.
- (2) Dongxia Wang, Post-Doctoral Scholar (Civil Engineering/Geophysics) 2003–2005, Univ. of Akron
- (1) Bao-Ping Shi, Post-Doctoral Scholar (Seismology), 2002–2003, Univ. of Nevada-Reno

Undergraduate Research Sponsor:

- (10) Chase Lockhart (Summer-Fall 2014), (9) Taylor Chapman (summer 2014), (8) Fei Wang (Fall 2013, unpaid), (7) Andrew Holcomb (2012–2013), (6) Cate Burton (summer 2010–2011), (5) Travis Richards (summer 2006), (4) Chrystina Smith (summer 2006), (3) Andrew Lynch (summer 2005), (2) Cora Anderson (2005–2006), (1) David Vance (2001–2004)

Pedagogic Service:

- Director of Graduate Studies, 2013-Present, UK Dept. Earth & Environmental Sciences
- Associate Chair, 2017-Present, UK Dept. Earth & Environmental Sciences
- External Program Review, chair, 2018, University of Southern Illinois, Dept. of Geology
- Associate Director, 1999-Present, Kentucky Seismic and Strong-Motion Network
- Faculty Associate, 2001-Present Kentucky Geological Survey
- EES Liaison, 2012-Present, KGS Earth Modeling and Visualization Laboratory
- Full Member, 2004-Present University of Kentucky Graduate Faculty
- Associate Member, 2001-2004 University of Kentucky Graduate Faculty
- Member, 2001-2003 Kentucky Governor's Earthquake Task Force
- Vice Chair, 2000-2004 Association of Engineering Geologists–Ohio Valley Section
- Chair, 2005-2007 Association of Engineering Geologists–Ohio Valley Section
- Member Representative, 2003-Present Incorporated Research Institutions for Seismology (IRIS)
- Faculty Advisor, 2010-2015, Semper Fi Society, University of Kentucky Student Activities
- Invited Ph.D. Committee Member, 2010, Carlton University, Dept. Civil Engineering, Ottawa, Canada

- Member, Seismic Site Characterization Guidelines Advisory Board, 2010–2012, Geological Survey of Canada (Commission géologique du Canada)
- Chair, 2011 College of Engineering Committee for Named Chairs and Professorships
- Member, 2011-12 Department of Civil Engineering 5-Year Review Panel
- Chair, 2011-12 Pioneer Natural Resources Professor in Stratigraphy Search Committee
- Chair, 2012-13 Pioneer Natural Resources Professor in Stratigraphy Search Committee
- Chair, 2014 Computational Geophysics Search Committee
- Member, 2013-15 Stable Isotope Geochemistry Search Committee
- Member, 2011 Lecturer Search Committee, Dept. of Earth & Environmental Sciences
- Acting Director, Spring 2011, Dept. Earth & Environmental Sciences Undergraduate Studies
- Member, 2011-12 Curriculum Committee, Dept. Earth & Environmental Sciences
- Member, 2013-14 Curriculum Committee, Dept. Earth & Environmental Sciences
- Member, 2014-15 Curriculum Committee, Dept. Earth & Environmental Sciences
- Member, 2016-17 Curriculum Committee, Dept. Earth & Environmental Sciences
- Member, 2011, Seismic Network Operator Search Committee, Kentucky Geological Survey
- Chair, 2012, EES Chair Search Committee, College of Arts and Sciences
- Chair, 2016, EES Chair Search Committee, College of Arts and Sciences
- Chair, 2012-13, EES Space Committee
- Peer Reviewer, Scientific Report of Investigation, 2010, United States Geological Survey
- Peer Reviewer, National Science Foundation
- Peer Reviewer, Scholarly Journals
 - Science
 - Bulletin of the Seismological Society of America
 - Geological Society of America Bulletin
 - Geophysical Journal International
 - Earthquake Spectra
 - Seismological Research Letters
 - Geophysical Research Letters
 - Journal of Geodynamics
 - Tectonophysics
 - Journal of Environmental and Engineering Geophysics
 - Environmental and Engineering Geoscience
 - International Journal of Coal Geology
 - Journal of Earthquake Engineering
 - Journal of Hydrology
 - Journal of China University of Geosciences
 - Geophysics
 - Journal of Pure and Applied Geophysics
 - Journal of Soil Dynamics and Earthquake Engineering
 - Journal of Applied Geophysics
 - Engineering
- Technical Committee, 2017-18, Symposium on Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Nashville, Tn.
- Organizing Committee, Executive Chairman, 2017-18, 8th International Conference on Environmental and Engineering Geophysics (ICEEG2018), Hangzhou, P.R. China
- Academic Committee, Member, 2018 International Workshop on the Large-Scale Geophysical Laboratory Model Site, Lincheng, P.R., China
- Session Chair, 2018, Engineering Geophysics, 8th International Conference on Environmental and Engineering Geophysics (ICEEG2018), Hangzhou, P.R. China
- Session Co-Chair, 2008 North-Central Geological Society of America, “Neotectonics of the Central U.S.”
- Session Chair, 2006 Highway Geophysics Conference, “Determination of Lithology”
- Session Chair, 2006 Highway Geophysics Conference, “Miscellaneous Geophysical Methods”
- Session Chair, 2004 International Conference on Environmental and Engineering Geophysics, Wuhan, P.R. China, “Seismic Acquisition, New Technologies, and Applications”
- Member, 2001-Present Graduate Committee, Dept. of Earth & Environmental Sciences

- Member, 2004-06 Personnel/Budget Committee, Dept. of Earth & Environmental Sciences
- Member, 2009-10 Personnel/Budget Committee, Dept. of Earth & Environmental Sciences
- Member, 2013-14 Personnel/Budget Committee, Dept. of Earth & Environmental Sciences
- Member, 2014-15 Personnel/Budget Committee, Dept. of Earth & Environmental Sciences
- Member, 2016-17 Personnel/Budget Committee, Dept. of Earth & Environmental Sciences
- Liaison, 2009-2010 College Diversity Board, Dept. of Earth & Environmental Sciences
- Member, 2005 Department Chair Search Committee, Dept. of Earth & Environmental Sciences
- Member, 2010 Hydrogeology Faculty Search Committee, Dept. of Earth & Environmental Sciences
- Member, 2011 Lecturer Search Committee, Dept. of Earth & Environmental Sciences
- Chair, 2006 Geophysics Faculty Search Committee, Dept. of Earth & Environmental Sciences
- Chair, 2007 Geophysics Faculty Search Committee, Dept. of Earth & Environmental Sciences
- Chair, 2009 Department Chair Search Committee, Dept. of Earth & Environmental Sciences
- Member, 2005 Staff Geophysicist Search Committee, Kentucky Geological Survey
- Coordinator, 2008 (Spring Semester) Rast–Holbrook Seminar Series
- Technical Advisor, 2001-Present Kentucky Cabinet of Health Services
- Technical Advisor, 2001-Present Kentucky Division of Waste Management
- Technical Advisor, 2003-Present Kentucky Research Consortium for Energy and Environment
- Distinguished Slemmon Mentor, 2002 Geological Society of America
- Consultant, 1999-2005 U.S. Army Corps of Engineers
- Consultant, 2000 Marathon-Ashland Petroleum Company
- Consultant, 1999-2005 FMSM Engineers, Inc.
- Consultant, 2008 AMEC Earth and Environmental, Inc.
- Consultant, 2010 DLZ Corporation
- Consultant, 2015-16 Gannett-Fleming
- Media Relations (Selected Interviews)
 - Evansville Courier Press/Associated Press, 2008, 18April2008 M5.2 Earthquake So. IL.
 - The Paducah Sun, 2007, Earthquake Impact on Soil
 - China Central Television, 2006, Earthquake Research – Tibetan Plateau
 - St. Louis Dispatch, 2006, Deep Seismic Borehole Observatory
 - Louisville Courier Journal, 2006, Deep Seismic Borehole Observatory
 - China Central Television, 2005, Scholarly Exchange – A Discussion with the Vice Governor, Gansu Province, PRC
 - Associated Press, 2004, Minor Earthquake in Southeastern Kentucky
 - Louisville Courier Journal, 2002, Darmstadt, IN Earthquake
 - WLEX-TV (NBC-Lexington, KY), 2001, M6.8 Washington Earthquake
 - WTVQ-TV (ABC-Lexington, KY), 2001, M6.8 Washington Earthquake

Professional Registration:

Professional Geologist; Commonwealth of Kentucky

- Certified - December, 1993, License No. - 1183

Engineer Intern (EIT); Commonwealth of Kentucky

- Certified - April, 1996; Eligible for Professional Engineer Exam (PE).

Professional Societies:

Society of Exploration Geophysicists

Near-Surface Geophysical Society

American Geophysical Union

Environmental and Engineering Geophysical Society

Association of Engineering Geologists/Ohio Valley Section, Association of Engineering Geologists

Seismological Society of America

American Society of Civil Engineers (lapsed)

Kentucky Geotechnical Engineering Society (lapsed)

Research and Scholarship

Funding:

- (54) PI, Integrated Geophysical Surveying of Seismotectonic Structure in the new Madrid Seismic Zone, Central United States
Agency: *U.S. Dept. of Energy/KRCEE*
Period: 01-May-2018 to 30-Apr-2019
Amount: \$4,981
- (53) PI, High-Resolution Seismic Imaging for Earthquake Hazards in the United States: Collaborative Research between the U.S. Geological Survey and University of Kentucky
Agency: *U.S. Geological Survey*
Period: 22-May-2017 to 21-May-2022
Amount: \$20,080 (for FY2018-19)
- (52) PI, VISTA16 Seismic Signal Processing Software, University Donation Program (Educational)
Agency: *Schlumberger, WesternGeco LLC.*
Period: 23-Jun-2017 to 01-Jul-2020
Amount: \$313,950
- (51) Co-PI, PXD Geomechanics V1
Agency: *Pioneer Natural Resources, Inc.*
Period: 17-Apr-2015 to 01-Sep-2016
Amount: \$88,999
- (50) PI, Seismic Potential of the New Madrid Seismic Zone's Reelfoot Fault: Collaborative Research with the University of Memphis and University of Kentucky
Agency: *U.S. Geological Survey*
Period: 01-Jan-2014 to 30-Apr-2015
Amount: \$45,650
- (49) Co-PI, Brady Sand Mine: Phase I Seismic Investigation
Agency: *Pioneer Natural Resources, Inc.*
Period: 01-Apr-2014 to 31-Mar-2015
Amount: \$86,745
- (48) PI, Kingdom Suites Modeling Software, University Gift Program (Educational)
Agency: *IHS, Inc.*
Period: 10-Sep-2013 to 09-Sep-2019
Amount: \$627,210
- (47) PI, Nano-Particle Geophysical Support: Seismic Modeling Pt. 3
Agency: *U.S. Dept. of Energy/KRCEE*
Period: 01-Oct-2012 to 30-Sep-2013
Amount: \$29,000
- (46) PI, Towards Construction of the Central United States Seismic Observatory and Calibration Site: Defining the Geologic Site Model–Part 2
Agency: *U.S. Geological Survey*
Period: 01-Jun-2011 to 31-Dec-2012
Amount: \$67,672
- (45) PI, Nano-Particle Geophysical Support: Seismic Modeling Pt. 2
Agency: *U.S. Dept. of Energy/KRCEE*
Period: 27-Feb-2012 to 30-Sep-2012
Amount: \$22,275

- (44) PI, High-resolution P- and S-Wave Velocity Structure of the Post-Paleozoic Sediments in the Upper Mississippi Embayment: Collaborative Research between the University of Kentucky and the University of Memphis
Agency: *U.S. Geological Survey*
Period: 01-Jul-2009 to 30-Jun-2011
Amount: \$89,567
- (43) PI, Nano-Particle Geophysical Support: Seismic Modeling
Agency: *U.S. Dept. of Energy/KRCEE*
Period: 01-Apr-2009 to 30-Sep-2011
Amount: \$68,612
- (42) PI, Ground Motion Site Effects in the Wabash Valley Region from the 18 April 2008 Mt. Carmel, Illinois Earthquake and Aftershocks
Agency: *U.S. Geological Survey*
Period: 01-Jul-2009 to 30-Jun-2010
Amount: \$45,896
- (40) PI, Kingdom Software, University Gift Program (Educational)
Agency: *Seismic Micro-Technology, Inc.*
Period: 01-Aug-2009 to 31-Jul-2012
Amount: \$727,050
- (39) PI (Internal), 48-Channel Engineering Seismograph
Agency: *University of Kentucky, Vice President of Research/College of Arts and Science*
Period: 01-May-2009 to 30-Jun-2009
Amount: \$61,000
- (38) PI, UK Paducah Gaseous Diffusion Plant – Seismic Review
Agency: *Kentucky Department for Public Health*
Period: 01-Jul-2008 to 30-Jun-2009
Amount: \$27,471
- (37) PI, Geophysical Investigation – Green River Dam (Consultant)
Agency: *U.S. Army Corps of Engineers/AMEC Earth and Environmental Inc.*
Period: 15-May-2008 to 30-Jun-2008
Amount: \$27,868
- (36) Co-PI, Toward Construction of the Central United States Seismic Observatory and Calibration Site: Phase III, Instrumentation
Agency: *U.S. Geological Survey*
Period: 01-Jul-2008 to 30-Jun-2009
Amount: \$55,850
- (35) PI, Toward Construction of the Central United States Seismic Observatory and Calibration Site: Phase II, Defining the Geologic Site Model
Agency: *U.S. Geological Survey*
Period: 01-May-2008 to 30-Apr-2009
Amount: \$58,617
- (34) Co-PI, Analysis of Wolf Creek Dam Rehabilitation Project
Agency: *Federal Emergency Management Agency (through U.K. Office of President)*
Period: 01-Oct-2007 to 30-Sep-2008
Amount: \$203,057

- (33) Co-PI, Mid-America Integrated Seismic Networks – UKY
Agency: *U.S. Geological Survey*
Period: 01-Feb-2007 to 31-Jan-2010
Amount: \$108,871
- (32) PI, Integrated Geophysical Imaging of Subsurface Geologic Conditions across the Northwest Contaminant Plume, Paducah Gaseous Diffusion Plant
Agency: *U.S. Dept. of Energy/Ky. Research Consortium for Energy and Environment*
Period: 01-Aug-2007 to 30-Sep-2008
Amount: \$38,937
- (31) PI (Internal), Microgravimeter (Major Research Equipment Acquisition)
Agency: *University of Kentucky, Vice President of Research*
Period: 01-Jul-2007 to 30-Jun-2008
Amount: \$85,000
- (30) PI, Central United States Seismic Observatory: Phase I, Deep Borehole Installation
Agency: *U.S. Geological Survey*
Period: 01-Aug-2006 to 31-Jul-2007
Amount: \$45,345
- (29) Co-PI, Deep Borehole in the New Madrid Seismic Zone, Central United States
Agency: *U.S. Dept. of Energy/Ky. Research Consortium for Energy and Environment*
Period: 01-May-2006 to 30-Apr-2007
Amount: \$200,000
- (28) PI, High-resolution P- and S-Wave Velocities of the Post-Paleozoic Sediments in the Upper Mississippi Embayment: Collaborative Research between the University of Kentucky and the University of Memphis
Agency: *U.S. Geological Survey*
Period: 01-Mar-2006 to 28-Feb-2007
Amount: \$34,991
- (27) PI (Internal), Geophysical Equipment for Teaching
Agency: *University of Kentucky, Dean, College of Arts and Sciences*
Period: 01-Jan-2006 to 30-Jun-2006
Amount: \$104,000
- (26) PI (Internal), Pseudo-Random Seismic Energy Source (Major Research Equipment Acquisition)
Agency: *University of Kentucky, Vice President of Research*
Period: 01-Jul-2005 to 30-Jun-2006
Amount: \$21,920
- (25) Co-PI, Earthquake Hazard and Risk in the Urban Area: Collaborative Research between the University of Kentucky and the Lanzhou Institute of Seismology, China Earthquake Administration
Agency: *National Science Foundation – MCEER*
Period: 01-Jun-2005 to 31-Aug-2005
Amount: \$5,000
- (24) PI, High-Resolution Geophysical and Geological Investigations of Lower Wabash Valley Fault System Neotectonics
Agency: *U.S. Geological Survey*
Period: 01-Apr-2005 to 31-Mar-2006
Amount: \$47,498
- (23) PI, Holocene Fault Investigation, C-746-U Landfill, PGDP
Agency: *U.S. Dept. of Energy/Ky. Research Consortium for Energy and Environment*
Period: 01-Dec-2004 to 31-Sep-2005
Amount: \$25,000

- (22) PI, S- and P-wave Velocity Measurements at Seismic Network Expansion Sites
Agency: *U.S. Dept. of Energy/Ky. Research Consortium for Energy and Environment*
Period: 01-Dec-2004 to 31-Sep-2005
Amount: \$20,574
- (21) PI, High-Resolution Geophysical and Geological Investigations of Late Quaternary Deformation in the Lower Wabash Valley Fault Zone
Agency: *U.S. Geological Survey*
Period: 01-Apr-2004 to 31-Mar-2005
Amount: \$54,158
- (20) PI, Ground Motion Site Effects in the Wabash Valley Region from the 18 June 2002 Darmstadt Earthquake
Agency: *U.S. Geological Survey*
Period: 01-Apr-2004 to 31-Mar-2005
Amount: \$45,774
- (19) PI, Seismic Hazard Assessment of the Jackson Purchase, Western Kentucky
Agency: *U.S. Dept. of Energy/Ky. Research Consortium for Energy and Environment*
Period: 01-Jan-2004 to 31-Dec-2005
Amount: \$86,885
- (18) Co-PI, Mid-America Integrated Seismic Networks – UKY
Agency: *U.S. Geological Survey*
Period: 01-Jan-2004 to 31-Jan-2007
Amount: \$107,921
- (17) PI, CHS04 Paducah Gaseous Diffusion Plant: Seismological and Geotechnical Oversight
Agency: *Kentucky Cabinet for Health Services*
Period: 01-Jul-2003 to 30-Jun-2004
Amount: \$25,401
- (16) PI, CHS Paducah Gaseous Diffusion Plant: Seismological and Geotechnical Oversight
Agency: *Kentucky Cabinet for Health Services*
Period: 01-Jul-2002 to 30-Jun-2003
Amount: \$26,212
- (15) Co-PI, Preliminary Seismic Hazard Assessment for Western Kentucky
Agency: *Western Kentucky Energy and Economic Consortium*
Period: 01-Aug-2002 to 31-Jan-2003
Amount: \$112,989
- (14) PI, Seismic Modeling Algorithms (EDUCATIONAL)
Agency: *Seismic Micro-Technology*
Period: 01-Mar-2002 to 01-Sep-2005
Amount: \$216,480
- (13) PI, A Comprehensive Geotechnical Investigation and Borehole Accelerometer Array Installation in the New Madrid Seismic Zone.
Agency: *U.S. Geological Survey*
Period: 01-Apr-2002 to 31-Mar-2003
Amount: \$68,892
- (12) PI, Installation of a Vertical Strong-Motion Array—McCracken County, Kentucky.
Agency: *U.S. Dept. of Energy*
Period: 01-Jan-2002 to 30-Jun-2004
Amount: \$25,000

- (11) Co-PI, Seismic Hazard Maps and Time Histories for the Seismic Design of Highway Bridges
Agency: *Kentucky Department of Transportation*
Period: 01-Jan-2002 to 31-Dec-2002
Amount: \$46,020
- (10) PI, Ground-motion Assessment of the C-746-U Landfill–Paducah Gaseous Diffusion Plant
Agency: *Kentucky Division of Waste Management*
Period: 01-Jul-2002 to 30-Jun-2004
Amount: \$53,557
- (9) PI, Earthquake Hazard Assessment of CERCLA Cell–Paducah Gaseous Diffusion Plant
Agency: *Kentucky Cabinet for Health Services*
Period: 01-Jul-2001 to 30-Jun-2002
Amount: \$22,750
- (8) PI, Research Staff Participation in Oversight Program–Paducah Gaseous Diffusion Plant
Agency: *Kentucky Cabinet for Health Services*
Period: 01-Jan-2001 to 30-Jun-2001
Amount: \$7,975
- (7) PI, An Integrated Geophysical Assessment of Late Quaternary Neotectonics along the Northern Mississippi Embayment Extension of the Fluorspar Area Fault Complex.
Agency: *U.S. Geological Survey*
Period: 01-Apr-2000 to 31-Mar-2002
Amount: \$72,908
- (6) Co-PI, A Surface-to-Bedrock S-wave Investigation of the Post-Paleozoic Sediments across the Upper Mississippi Embayment between the 35th and 36th Parallels.
Agency: *U.S. Geological Survey*
Period: 01-Jan-2000 through 31-Dec-2001
Amount: \$112,816
- (5) PI, Geophysical Investigation of Mississinewa Dam, Miami County, Indiana
Agency: *U.S. Army Corps of Engineers*
Period: 01-Dec-1999 to 01-Mar-2000
Amount: \$16,000
- (4) PI, Seismic Reflection Investigation of Neotectonic Structure: J.T. Myers Locks/Dam, Indiana
Agency: *U.S. Army Corps of Engineers*
Period: 01-Sept-2000 to 01-Mar-2001
Amount: \$20,000
- (3) PI, Upgrade of a 48-channel, IFP, Engineering Seismograph.
Agency: *Federal Emergency Management Agency*
Period: 01-Mar-2000
Amount: \$15,000
- (2) Co-PI, Expansion of the Kentucky Seismic and Strong-Motion Network.
Agency: *Kentucky Department of Disaster and Emergency Services*
Period: 01-Jan-1999 to Jun-2000
Amount: \$57,812
- (1) Co-PI, Development of 250-year Earthquake Time Histories for Kentucky's County Seats.
Agency: *Kentucky Transportation Center*
Period: 01-Jan-2000 to 30-Jun-2000
Amount: \$7,500

Refereed Journal Publications, in Review or Revision: (* student author)

(52) Woolery, E., *J. Whitt, R. Van Arsdale, A. Almayahi (*in review*). Geophysical and geological evidence for Quaternary displacement on the Caborn fault, Wabash valley fault system, southwestern Indiana: *Seismological Research Letters*.

(51) *Crawford, M. L. Bryson, F. Ashland, E. Woolery, Z. Wang (*in review*). Long-term landslide monitoring using soil-water relationships and electrical data to estimate suction stress: *Engineering Geology*.

(50) *Muttashar, W., L. Bryson, M. McGlue, E. Woolery (*in review*). The integration grain-size distribution and plasticity parameters for better characterizing and classifying unconsolidated fine-grained sediments: *Journal of Sedimentary Geology*.

(49) Wang, Z., *N.S. Carpenter, and E. Woolery (*in review*). Horizontal-to-vertical spectral ratio of S-wave and SH-wave transfer function at the vertical seismic and strong-motion arrays in the central United States: *Journal of Applied Geophysics*.

(48) Counts, R., R. Van Arsdale, E. Woolery, M. Murari, L. Owen (*in revision*). Late Holocene faulting in the Wabash Valley seismic zone of western Kentucky: Closing the gap between the Wabash Valley and New Madrid seismic zones: *Bulletin of Seismological Society of America*.

Refereed Journal Publications, Accepted or Published: (* student author)

(47) Woolery, E. (*in press*). SH-mode seismic-reflection imaging of earthfill dams: *Engineering*.

(46) *Almayahi, A. and E. Woolery, (2018). Fault-controlled contaminant plume migration: Inferences from SH-wave reflection and electrical resistivity experiments: *Journal of Applied Geophysics*, v. 158, p. 57–64.

(45) *Crawford, M., L.S. Bryson, E. Woolery, Z. Wang (2018). Using 2-D electrical resistivity imaging for joint geophysical and geotechnical characterization of landslides: *Journal of Applied Geophysics*, v. 157, p. 37–46, doi: 10.1016/j.jappgeo.2018.06.009.

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(42) Wang, Z., *N.S. Carpenter, L. Zhang, and E. Woolery (2017). Assessing potential ground-motion hazards from induced earthquakes: *Natural Hazards Review*, v. 18(4), doi: 10.1061/(ASCE)N.1527-6996.

(41) *Greenwood, M., E. Woolery, R. Van Arsdale, W. Stephenson, G. Patterson (2016). Continuity of the Reelfoot fault across the Cottonwood Grove and Ridgely Ridge faults of the New Madrid seismic zone: *Bulletin of Seismological Society of America*, v. 106, p. 2674–2685, doi: 10.1785/0120150290.

(40) Rong, M., Z. Wang, E. Woolery, Y. Lu, X. Li, S. Li (2016). Non-linear response from the ground-motion recordings in western China: *Journal of Soil Dynamics and Earthquake Engineering*, v. 82, p. 99 – 110, doi: 10.1016/2015.12.001.

(39) Woolery, E., Z. Wang, *N.S. Carpenter, R. Street, *C. Brengman (2016). The central United States seismic observatory – Site characterization, instrumentation, and recordings: *Seismological Research Letters*, v. 87, p. 215–228, doi: 10.1785/0220150169.

(38) Wang, Z., *A. Orton, L. Wang, E. Woolery (2015). Seismic hazard mapping and mitigation policy development in the central United States and western China: *Natural Hazards*, doi: 10.1007/s110690152086y.

- (37) Woolery, E. and *A. Almayahi (2014). Northeast-oriented transpression structure in the northern New Madrid seismic zone—Extension of a shear zone across the Reelfoot fault stepover arm: *Bulletin of Seismological Society of America*, v. 104, no. 5, p. 2587–2596, doi: 10.1785/1020140066.
- (36) *Carpenter, N.S., E. Woolery, Z. Wang (2014). The Mw 4.2 Perry County, Kentucky, Earthquake of November 10, 2012: Evidence of the Eastern Tennessee seismic zone in southeastern Kentucky: *Seismological Research Letters*, v. 85, p. 931–939, doi: 10.1785/022030221.
- (35) Woolery, E. and *A. Almayahi (2014). Shear-wave birefringence measurements in faulted near-surface sediment: *Bulletin of Seismological Society of America*, v. 104, p. 1540–1549, doi: 10.1785/0120130150.
- (34) Van Arsdale, R., *D. Pryne, E. Woolery (2013). Northwestern extension of the Reelfoot north fault near New Madrid, Missouri: *Seismological Research Letters*, v. 84, p. 1124–1129, doi: 10.1785/0220130067.
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- (31) Woolery, E., R. Street, P. Hart, P. Padgett (2012). Two decades of linear site-effect observations (>2 Hz) in the Wabash Valley, Central United States—Context for the 2008 Illinois earthquake sequence: *Seismological Research Letters*, v. 83, no. 6, p. 1090 – 1103, doi: 10.1785/0220120007
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- (27) Woolery, E., J. Baldwin, K. Kelson, S. Hampson, R. Givler, S. Sundermann (2009). Site-specific fault assessment in the Fluorspar Area fault complex western Kentucky: *Seismological Research Letters*, v. 80, no. 6, p. 953–962, doi: 10.1785/gssrl.80.6.953
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- (15) McBride, J., A. Pugin, W. Nelson, T. Larson, S. Sargent, J. Devera, F. Denny, E. Woolery (2003). Unusual and variable post-Paleozoic deformation detected by seismic reflection profiling across northwestern “prong” of New Madrid seismic zone, *Tectonophysics*, v. 368, p. 171–191.
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- (11) Woolery, E. and R. Street (2002). Quaternary Fault Reactivation in the Fluorspar Area Fault Complex of Western Kentucky—Evidence from Shallow SH-wave Reflection Profiles: *Seismological Research Letters*, v. 73, p. 628–639.
- (10) Street, R., G. Bollinger, E. Woolery (2002). Blasting and Other Mining-Related Activities in Kentucky: A Source of Earthquake Misidentification: *Seismological Research Letters*, v, 73, p. 739–750.
- (9) Street, R., E. Woolery, Z. Wang, J. Harris (2001). NEHRP soil classifications for estimating site-dependent seismic coefficients in the central Mississippi River valley: *Engineering Geology*, v. 62, p. 123-135.
- (8) Wang, Z., R. Street, E. Woolery, I. Madin (2000). Shear-wave (SH) reflection/refraction and site characterization: Use of geophysical methods in construction: *American Society of Civil Engineers Geotechnical Special Publication No. 108*, eds. S. Nazarian and J. Diehl, p. 126-140.
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(3) Street, R., E. Woolery, Z. Wang, J. Harris (1994). A short note on shear-wave velocities and other site conditions at selected strong-motion stations in the New Madrid seismic zone: *Seismological Research Letters*, v. 66, no.1, p. 56-63.

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(120) *Muttashar, W., L. Bryson, M. McGlue, E. Woolery (2018). A methodology for characterizing and classifying unconsolidated inorganic fine-grained sediments: *Geological Society of America, Abstract #321722*.

(119) *Swallow, M., R. Thigpen, *R. Hoar, S. Brown, M. McGlue, E. Woolery (2018). Constraining spatial and temporal landscape response rates to Teton fault activity through apatite helium thermochronology and limnogeology: *Geological Society of America, Abstract #322631*.

(118) Counts, R., E. Woolery, *A. Eason, D. Larson, R. Van Arsdale (2018). Late Pleistocene and Holocene faulting southeast of the New Madrid seismic zone: The Joiner Ridge and Meeman-Shelby blind horsts, eastern Arkansas: *Geological Society of America, Abstract #319884*.

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(115) Thigpen, R., *M. Swallow, *R. Hoar, S. Brown, M. McGlue, E. Woolery (2018). Defining the active northern extent of the Teton fault: *American Geophysical Union*.

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(112) Harris, J., *B. Rosandich, E. Woolery (2017). High-resolution seismic reflection imaging of the Reelfoot fault, New Madrid, Missouri: *Abstract 118807, NS23A-0003, American Geophysical Union Fall Meeting, New Orleans, LA*.

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- (107) *Rucker, C., E. Woolery (2017). Constraining the northern boundary of the Charleston uplift using seismic reflection methods, *Seismological Society of America Annual Meeting, Denver, CO.*
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- (105) *Holcomb, A., *N.S. Carpenter, E. Woolery, Z. Wang (2017). Eastern Kentucky microseismic monitoring project: year one network observations and detection threshold estimation, *Eastern Section of the Seismological Society of America – 89th Annual Meeting.*
- (104) *Brenngman, C., E. Woolery, Z. Wang, *N.S. Carpenter (2016). Instrument correction and dynamic site profile validation at the Central United States Observatory, New Madrid seismic zone, *Abstract 118807, NS31A-1939, American Geophysical Union Fall Meeting, Dec. 12–16, San Francisco, CA.*
- (103) *Carpenter, N.S., Z. Wang, M. Rong, E. Woolery (2016). Estimating site effect in the central U.S. from deep borehole and surface recordings of ambient noise and earthquake and blast shear waves, *Eastern Section of the Seismological Society of America – 88th Annual Meeting.*
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- (76) Chiu, J., C. Obikili, E. Woolery Z. Wang (2011). High-Resolution Vp and Vs Structure of the Post-Paleozoic Sediments in Western Kentucky and Northwestern Tennessee of Upper Mississippi Embayment, Central USA, *Seismological Research Letters*, v. 82, n. 2, p. 322.
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- (74) Van Arsdale, R., K. Stevens, R. Cox, *T. Deen, M. Velasco, E. Woolery, J. Harris (2011). Living on the Edge – Memphis, *Seismological Research Letters*, v. 82, n. 2, p. 302.
- (73) *Butler, D., Z. Wang, E. Woolery, L. Wang, Z. Yuan (2011). Scenario-Based Seismic Hazard Assessment of Tianshui, Gansu Province, China, , *Seismological Research Letters*, v. 82, n. 2, p. 300.
- (72) *Paschall, A., E. Woolery, R. Street (2011). Comparing the Observed and Predicted Linear Site Effect from the April 2008 Mount Carmel IL M5.2 Earthquake, Central United States, *Seismological Research Letters*, v. 82, n. 2, p. 298.
- (71) *Gowda, S., E. Woolery, Z. Wang, J. McIntyre (2011). Comparing Predicted and Observed Peak Ground Acceleration at Two Vertical Strong-Motion Arrays in the Central United States, *Seismological Research Letters*, v. 82, n. 2, p. 322.
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- (69) Counts, R., R. Van Arsdale, S. Obermeier, S. Mahan, M. Tuttle, E. Woolery, T. Crone (2011). Paleoseismology in the New Madrid and Wabash Valley Seismic Zones, Central United States, *International Union for Quaternary Research*, XVIII Congress, Bern, Switzerland.
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- (8) Woolery, E., R. Street and S. Hornbeck (2001). Anomalous crest settlement at Mississinewa Dam, Indiana—An application of high-resolution SH-wave seismic techniques: *2001 Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP)*, CHP-2.
- (7) Woolery, E., S. Hornbeck and D. Robison (1998). Seepage Remediation at Patoka Lake, Indiana: *1998 Annual Conference of the Association of State Dam Safety Officials, Expanded Abstracts with Programs*, p. 109-120.
- (6) Woolery, E. (1998). Mosquito Creek Dam, Trumbull County, Ohio—Seismic Safety Review and Liquefaction Evaluation: *U.S. Army Corps of Engineers Periodic Inspection, Mosquito Creek Dam*, 46 p.
- (5) Woolery, E. and R. Street (1997). A seismological/geological evaluation with liquefaction and deformation analyses of Rough River Dam, Breckinridge County, Kentucky: *U.S. Army Corps of Engineers Periodic Inspection No. 7, Rough River Dam (supplement)*, 600p.
- (4) Woolery, E. (1997). Seismic safety review of Buckhorn Dam, Perry County, Kentucky: *U.S. Army Corps of Engineers Periodic Inspection No. 7, Buckhorn Dam (supplement)*, 110 p.
- (3) Street, R., Z. Wang, E. Woolery, I. Harik and D. Allen (1997). Dynamic site periods for the Jackson Purchase region of western Kentucky: *Kentucky Dept. of Transportation Report KTC-97-1*, 103 p.
- (2) Wang, Z., X. Zeng, E. Woolery, R. Street and B. Ni (1996). A comprehensive geological/geotechnical study and site response at selected sites in the New Madrid Seismic Zone: *11th World Conference on Earthquake Engineering Proceedings, Acapulco, Mexico, Expanded Abstracts.*
- (1) Woolery, E., R. Street, J. Harris, and Z. Wang (1992). Investigation of structural deformation in unconsolidated sediments using high-resolution SH-wave seismic methods: *62nd Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts*, p. 291-294.

Invited Presentations:

- (KEYNOTE) 8th International Conference on Environmental and Engineering Geophysics, June 2018, “Fault-Controlled Contaminant Plume Migration: Inferences from SH-wave Reflection and Electrical Resistivity Experiments,” Hangzhou, P.R. China
- Institute of Crustal Dynamics—China Earthquake Administration, June 2018, “Enigmatic Site Effect: CUSSO—Vertical Borehole Array,” Beijing, P.R. China
- University of Memphis, Dept. of Earth Science Colloquium Series, February 2018, “Seismic-Reflection Experiments and Reelfoot Faulty Segmentation,” Memphis, TN

- Environmental and Engineering Geophysical Society UK Student Chapter, September 2017, "Application of SH-Mode Seismic Imaging for Earthen Dams and Foundations"
- Kentucky Geological Survey Seminar Series, January 2017, "Toward Continuity and Accommodation in the New Madrid Seismic Zone?"
- American Institute of Professional Geologists – Kentucky Section, October 2015, Professional Development Conference: Geophysical Techniques and Applications – Non-Invasive Methods for Subsurface Characterization and Interpretation, "Reflection and Refraction Seismology: Concepts Review with Case Histories," Lexington, KY.
- 5th International Conference on Environmental and Engineering Geophysics, June 2012, "SH-Wave Reflection Imaging in Unlithified Sediment—An Environmental and Seismic Hazards Application," Changsha, P.R. China
- Institute of Crustal Dynamics—China Earthquake Administration, November 2011, "Enigmatic Earthquake Site Effect," Beijing, P.R. China
- Fujian Earthquake Administration, November 2011, "Nature of the Earthquake Site Effect—An Overview," Fuzhou, P.R. China
- Hubei Earthquake Bureau and Institute of Earthquake Engineering, "Nature of the Earthquake Site Effect—An Overview,"
- Lanzhou Institute of Seismology, October 2011, "Enigmatic Earthquake Site Effect," Lanzhou, Gansu Province, P.R. China
- American Red Cross Bluegrass Chapter, June 2011, "Earthquakes and Earthquake Hazards in the Central United States," Lexington, KY
- Kentucky Paleontology Society, September 2010, "Earthquakes—The Contemporary, Historical, and Paleoseismology of Kentucky and the Central United States," Lexington, KY
- Institute of Crustal Dynamics—China Earthquake Administration, June 2010, "Assessing the Earthquake Site Effect," Beijing, P.R. China
- Lanzhou Institute of Seismology, June 2010, "Assessing the Earthquake Site Effect," Lanzhou, Gansu Province, P.R. China
- Lanzhou Institute of Seismology, July 2009, "Earthquake Site Effects: Examples from the Central U.S.," Lanzhou, Gansu Province, P.R. China
- U.S. Geological Survey—Central and Eastern Region, October 2008, "CEUS Seismic Hazards: An Investigators 15+ Years of Geological, Geophysical, and Geotechnical Experiments and Applications," Memphis, TN
- Kentucky Cabinet of Health Services, July 2008, "Seismic Hazards," Frankfort, KY
- Kentucky Research Consortium for Energy and Environment, October 2007, "Neotectonics and Historical Seismicity in Western Kentucky," Lexington, KY
- University of Memphis, May 2007, "Central United States Seismic Observatory and Calibration Site," Memphis, TN
- University of Memphis, November 2006, "Shear Reflections and Fault Assessments: Examples from Northern Mississippi Embayment," Memphis, TN
- Lanzhou Institute of Seismology, June 2005, "Quaternary Fault Assessments in the Central United States—Applications for High-Resolution SH-Wave Reflection Imaging," Lanzhou, Gansu Province, P.R. China
- Northern Kentucky University, April 2005, "Geophysical Applications to Neotectonics," Highland Heights, KY
- Kentucky Geological Survey, April 2005, "Shear Reflections: A Decade+ of High-Resolution Imaging," Lexington, KY
- Institute of Crustal Dynamics: China Earthquake Administration, June 2004, "Neotectonics in the Central United States," Beijing, P.R. China
- International Conference on Environmental and Engineering Geophysics, June 2004, "SH-Wave Seismic Reflection Imaging – Applications to High-Capacity Foundation Engineering," Wuhan, P.R. China
- Case Western Reserve University, International Workshop on Stability of Tailings Dams, November 2003, "Seismicity in the Southern Appalachians," Cleveland, OH
- Central United States Earthquake Consortium, Tri-State Quaternary Mapping Conference, November 2003, "P- and S-Wave Data Acquisition: Land Surveys," Evansville, IN

- Eastern Kentucky University, Department of Earth Sciences, October 2003, "Anomalous Stress in Unlithified Sediment of the Northern Mississippi Embayment: Geotechnical and Geophysical Indicators for a Tectonic Origin," Richmond, KY
- Central United States Earthquake Consortium, June 2003, "The Origin and Significance of the Earthquake Site Effect," Nashville, TN
- Marshall University, 2003 Transportation Geohazards Symposium, July 2003, "SH-Wave Reflections in Karst Terrain: Mississinewa Dam, Indiana," Lexington, KY
- Kentucky Geological Survey-NEHRP Seismic Hazard and Design Map Workshop, November 2002, "Western Kentucky Seismicity and Neotectonics: Integrated Geophysical and Geological Solutions," Lexington, KY
- University of Cincinnati, Department of Geology, September 2002, "A Tectonic Origin for Anomalous In-Situ Stress in Near-Surface Sediment: Evidence from High-Resolution Seismic Reflection Images along the Lower Ohio River," Cincinnati, OH
- College of Charleston, Department of Geology, March 2001, "NEHRP Soil Classifications for Estimating Site-Dependent Seismic Coefficients in the Central Mississippi River Valley," Charleston, SC

Invited Short Course:

- Lanzhou Institute of Seismology, China Earthquake Administration, June-July 2006, "Near-Surface Reflection Seismology with Field Applications," Lanzhou, Gansu Province, P.R. China
- ASBOG Exam Workshop, Geophysics, April, 2000, Kentucky Geological Survey, Lexington, Kentucky
- ASBOG Exam Workshop, Geophysics, April, 1999, Kentucky Geological Survey, Lexington, Kentucky

Other Training:

Certificate – Introduction to Geographic Information Systems (ARCVIEW)

ESRI: Lexington, KY – 12/98 (16 hrs.)

Certificate – Seismic Safety of Embankment Dams (II)

U.S. Army Corps of Engineers WES: Vicksburg, MS – 06/98 (40 hrs.)

Certificate – Seismic Safety of Embankment Dams: Groundmotion Design, Liquefaction, and Deformation

U.S. Army Corps of Engineers WES: Vicksburg, MS – 05/97 (40 hrs.)

Certificate – U.S. Army Ordnance and Explosives Workshop

U.S. Army Corps of Engineers Ordnance and Explosives Center of Expertise and Design: Reno, NV – 06/97 (40 hrs.)

Certificate – Geophysics for Environmental and Groundwater Applications

National Water Well Association: San Francisco, CA – 06/90 (24 hrs.)

Certificate – Risk Assessment for Superfund; Hazardous Toxic Waste Training Program

U.S. Army Corps of Engineers/Environmental Protection Agency: Huntsville, AL-10/89 (40 hrs.)

Certificate – Soil and Geology Inspection with Sampling Techniques

U.S. Army Corps of Engineers South Atlantic Laboratory: Marietta, GA – 12/85 (40 hrs.)