# James B. Harris 205 East Ford Street

# Ridgeland, Mississippi 39157

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harrijb@millsaps.edu (E-mail)

**PERSONAL:** Age 63

Married, United States Citizen

**EDUCATION:** Ph.D., Geology/Geophysics, 1992

University of Kentucky, Lexington, Kentucky

M.S., Geology/Geophysics, 1989

University of Kentucky, Lexington, Kentucky

B.S., Geophysics, 1985

University of Houston, Houston, Texas

B.S., Geology (mathematics minor), 1982

Eastern Kentucky University, Richmond, Kentucky

**EXPERIENCE:** Department of Geosciences, Millsaps College, Jackson, Mississippi

Professor, April 2007-present

Associate Professor, April 2001-April 2007 Assistant Professor, August 1995-April 2001

Department Chair, January 1998-August 2013, August 2019-present

Geological Survey of Canada, Vancouver, British Columbia, Canada

Post-doctoral Fellow, August 1994-August 1995

Geophysics, Earthquake Hazards

Kentucky Geological Survey, Lexington, Kentucky

Post-doctoral Research Associate, July 1992-July 1994

Geophysics

University of Kentucky, Lexington, Kentucky

Research Assistant, November 1987-June 1992

Kentucky Geological Survey; Department of Geological Sciences;

Center for Computational Sciences

Western Geophysical Company, Houston, Texas

Observer, Marine Seismic Crew, May 1985-October 1987

Beaufort Sea, Alaska; Gulf of Mexico

ARCO Exploration Company, Houston, Texas; Lafayette, Louisiana

Exploration Geophysicist, May-November 1982; May-August 1983

Seismic data interpretation and mapping;

Offshore central Louisiana; east Texas Cretaceous reef trend

ACADEMIC AWARDS & APPOINTMENTS: Harold Mooney Award, Society of Exploration Geophysicists, 2018

University of Kentucky Graduate Faculty, Associate Member, 2017-2020 W. Charles Sallis Award for Distinguished Service to the College, 2013

Division of Sciences, Excellence in Teaching Award, 2010 Carnegie/CASE Award, Mississippi Professor of the Year, 2009

Mississippi Legislature, HEADWAE Outstanding Faculty Honoree, 2006

China University of Geosciences Guest Professor, summer 2006

Millsaps College Distinguished Professor Award, 2006

Kentucky Geological Survey Visiting Scientist, summer 2003

#### **TEACHING:**

## Regular Courses:

Geology 1000 The Physical Earth

Geology 2000 Plate Tectonics and Earth History

Geology 3100 Solid Earth Geophysics Geology 3300 Applied Geophysics Geology 4200 Structural Geology

## Summer Field Courses:

Folded Rocks: Crossing Appalachia (2010, 2015)

Yellowstone Field Study (2000-2003, 2006, 2008, 2016, 2019)

Earthquakes and Volcanoes of the Pacific NW (2000, 2005, 2007, 2009, 2012, 2014, 2017, 2022)

Plate Tectonics and Geology of Southcentral Alaska (2001)

Southeast Alaska Field Study (2004)

Field Geology – SW Montana (1996-2002, 2004, 2006, 2009, 2011, 2014, 2016)

Field Geology – Scotland (2011, 2013, 2015, 2018)

# GEOPHYSICS RESEARCH STUDENTS:

## Seth A. Berman (1998)

Shallow seismic studies of the Big Creek fault zone, Arkansas and Mississippi

William C. Beard, III (1999)

Shallow seismic reflection profiling of Holocene faults near Monticello, Arkansas

Amy L. Osborn (1999)

Multicomponent seismic tests of the shallow subsurface in Yellowstone National Park

Brant W. Cole (2000)

Evaluation of seismic anisotropy in Quaternary sediments of the central New Madrid seismic zone

Jaime E. Miles (2000)

A hydrogeological and geophysical study of an unconfined aquifer on Millsaps College campus, Jackson, Mississippi; **Honors** 

Donald Shea Maddox (2001)

Seismic reflection profiling in support of hydrogeologic investigations of the Memphis aquifer; **Ford Fellow** 

William F. Reid, Jr. (2002)

Shallow seismic reflection imaging of the Idalia Hill Fault Zone, Southeastern Missouri: **Ford Fellow**  Jennifer L. Sorrells (2002)

Shear-wave seismic reflection imaging of the Big Creek escarpment near Helena, Arkansas: Evidence for a tectonic origin

Steven D. Sloan (2003)

Seismic investigation of surface deformation associated with the Kilmichael dome, Montgomery County, Mississippi; Ford Fellow

Andrew C. Sampson (2005)

Shallow seismic testing with various hammer sources at Enid Lake and Jackson (Mississippi); Ford Fellow

Angela B. Pell (2005)

Seismic reflection imaging of suspected "windows" in the upper confining unit of the Memphis (Tennessee) Aquifer; **Honors** 

Daniel C. Rice (2007)

Shallow seismic reflection profiling of the Bluff Line Lineament in Northwest Mississippi; **Ford Fellow** 

Erin T. Elliott (2008)

Shallow seismic reflection imaging of the Penitentiary Fault and its association with the Commerce Geophysical Lineament, Tamms, Southern Illinois; **Honors, Sorrells Fellow** 

David E. Smolkin (2008)

Shallow shear-wave seismic characterization of a Pleistocene gravel deposit, Yazoo County, Mississippi; **Sorrells Fellow** 

William L. Fontaine (2008)

Geophysical methods in support of archaeological excavation: Field tests at the Kiuic site, Yucatan, Mexico; **Honors, Sorrells Fellow** 

David T. Butler, III (2008)

Shallow shear-wave seismic velocity testing in Jackson, Mississippi; **Sorrells Fellow** 

J. Andrew Fleming (2009)

Subsurface characterization of a Bluffline Alluvial Fan, Northwest Mississippi; **Honors, Sorrells Fellow** 

Krista L. Clark (2010)

Evaluating sedimentation in a residential pond using ground penetrating radar; **Sorrells Fellow** 

Andrez M. Aguilar (2011)

Seismic investigation of the Bliss Creek Lineament in the Big Black River Valley, West-Central Mississippi

Joseph E. T. Hughes (2012-2013)

Shallow seismic investigation of the Commerce Geophysical Lineament, Qulin, Missouri; **Sorrells Fellow** Imaging Albanian tumuli using ground-penetrating radar and seismic tomography; **Honors** 

Gregory D. Machura (2014-2015)

Geophysical investigation of the Big Creek fault zone near Helena, Arkansas; **Sorrells Fellow** 

Jared S. Bullock (2016)

Geophysical imaging of the Big Ridge escarpment, Jackson County, Mississippi; **Sorrells Fellow** 

Brooks A. Rosandich (2016)

High-resolution geophysical characterization of the "New Madrid" fault: **Sorrells Fellow** 

Michael A. Rohrer (2017)

Shallow shear-wave seismic reflection imaging of deformation associated with the Daytona Beach sand blow deposits in Lee County, Arkansas; **Honors, Sorrells Fellow** 

Cooper S. Cearley (2018-2019)

Geophysical and paleoseismic investigation of the Kingtown lineament along the Big Creek fault zone, Phillips County, Arkansas; **Sorrells Fellow** 

Lindsey C. Howard (2021)

Evaluating the near-surface structure of the Daytona Beach lineament (Lee County, Arkansas) using SH-wave seismic reflection data;

#### Honors, Sorrells Fellow

Grant E. Burke (2021)

Shear-wave seismic reflection profiling in gas-charged sediments: Field tests from Plaquemines Parish, Louisiana

William H. Weber (2021-2022)

Development and testing of unmanned ground vehicles for surface seismic surveys

**PROFESSIONAL** Society of Exploration Geophysicists (SEG) **MEMBERSHIPS:** Near Surface Geophysics Section of SEG

American Geophysical Union (AGU)

Seismological Society of America (SSA) & Eastern Section of SSA

Environmental and Engineering Geophysics Society (EEGS)

**PROFESSIONAL** Registered Professional Geologist, Mississippi: 1999-present, Reg. # 0395 **REGISTRATION:** 

#### **PUBLICATIONS (Journal Articles):**

Harris, J. B., Jones D. R., and Street, R. L., 1991, A shallow seismic refraction study of the Versailles cryptoexplosion structure, central Kentucky: **Meteoritics**, v. 26, p. 47-53.

Street, R., Zekulin, A., and Harris, J., 1991, The Meade County, Kentucky, earthquakes of January and March 1990: **Seismological Research Letters**, v. 62, p. 105-111.

Harris, J. B., and Street, R. L., 1992, Shallow common-offset seismic profiling of a sub-Pennsylvanian paleovalley, western Kentucky: **Southeastern Geology**, v. 32, no. 4, p. 215-227.

Woolery, E. W., Street, R., Wang, Z., and Harris, J. B., 1993, Near-surface deformation in the New Madrid seismic zone as imaged by high-resolution SH-wave seismic methods: **Geophysical Research Letters**, v. 20, no. 15, p. 1615-1618.

Zhang, M., Street, R., Harris, J., and Drnevich, V. P., 1993, A note on the influence of site conditions on ground motion values observed for the southeastern Illinois earthquake of June 10, 1987: **Seismological Research Letters**, v. 64, p. 149-156.

- Street, R., Taylor, K., Jones, D., Harris, J., Steiner, G., Zekulin, A., and Zhang, D., 1994, The central Kentucky earthquake of September 7, 1988: **Seismological Research Letters**, v. 64, p. 187-200.
- Wang, Z., Street, R., Harris, J., and Woolery, E., 1994, Q<sub>s</sub> estimation for unconsolidated sediments using first-arrival SH wave critical refractions: **Journal of Geophysical Research**, v. 99, p. 13543-13551.
- Harris, J. B., Street, R. L., Kiefer, J. D., Allen, D. L., and Wang, Z. M., 1994, Modeling site response in the Paducah, Kentucky, area: **Earthquake Spectra**, v. 10, p. 519-538.
- Harris, J. B., and Kiefer, J. D., 1994, Update on the New Madrid seismic zone: **Geotimes**, v. 39, no. 7, p. 14-18.
- Street, R., Woolery, E., Wang, Z., and Harris, J., 1995, 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, p. 56-63.
- Luternauer, J. L., Harris, J. B., Hunter, J. A., and Finn, W. D. L., 1995, Fraser River delta geology: Modeling for seismic hazard assessment: **The BC Professional Engineer**, v. 46, no. 9, p. 10-14.
- Woolery, E. W., Wang, Z., Street, R. L., and Harris, J. B., 1996, A P- and SH-wave seismic reflection investigation of the Kentucky Bend scarp in the New Madrid seismic zone: **Seismological Research Letters**, v. 67, p. 67-74.
- Harris, J. B., 1996, Shear-wave splitting in Quaternary sediments: Neotectonic implications in the central New Madrid seismic zone: **Geophysics**, v. 61, p. 1871-1882.
- Harris, J. B., and Street, R. L., 1997, Seismic investigation of near-surface geological structure in the Paducah, Kentucky, area: Application to earthquake hazards evaluation: **Engineering Geology**, v. 46, p. 369-383.
- Street, R. L., Wang, Z., Woolery, E., Hunt, J., and Harris, J., 1997, Site effects at a vertical accelerometer array near Paducah, Kentucky: **Engineering Geology**, v. 46, p. 349-367.
- Hunter, J. A., Pullan, S. E., Burns, R. A., Good, R. L., Harris, J. B., Pugin, A., Skvortsov, A., and Goriainov, N. N., 1998, Downhole seismic logging for high resolution reflection surveying in unconsolidated overburden: **Geophysics**, v. 63, p. 1371-1384.
- Pullan, S. E., Hunter, J. A., Jol, H. M., Roberts, M. C., Burns, R. A., and Harris, J. B., 1998, Seismostratigraphic investigations of the southern Fraser River delta: *in* Geology and Natural Hazards of the Fraser River Delta, British Columbia; (*ed.*) J.J. Clague, J.L. Luternauer, and D. C. Mosher; Geological Survey of Canada, Bulletin 525, p. 91-122.

- Hunter, J. A., Douma, M., Burns, R. A., Good, R. L., Pullan, S. E., Harris, J. B., Luternauer, J. L., and Best, M. E., 1998, Testing and application of near-surface geophysical techniques for earthquake hazards studies, Fraser River delta, British Columbia: *in* **Geology and Natural Hazards of the Fraser River Delta, British Columbia**; (*ed.*) J. J. Clague, J. L. Luternauer, and D. C. Mosher; Geological Survey of Canada, Bulletin 525, p. 123-145.
- Harris, J. B., Hunter, J. A., Luternauer, J. L., and Finn, W. D. L., 1998, Site amplification modelling of the Fraser delta, British Columbia: *in* Geology and Natural Hazards of the Fraser River Delta, British Columbia; (*ed.*) J. J. Clague, J. L. Luternauer, and D. C. Mosher; Geological Survey of Canada, Bulletin 525, p. 211-216.
- Woolery, E. W., Street, R. L., Wang, Z., Harris, J. B., and McIntyre, J., 1999, Neotectonic structure in the central New Madrid seismic zone: Evidence from multimode seismic reflection data: **Seismological Research Letters**, v. 70, p. 554-576.
- Cox, R. T., Van Arsdale, R. B., Harris, J. B., Forman, S. L., Beard, W., and Galluzzi, J., 2000, Quaternary faulting in the southern Mississippi embayment and implications for tectonics and seismicity in an intraplate setting: **Geological Society of America Bulletin**, v. 112, p. 1724-1735.
- Xia, J., Miller, R. D., Park, C. B., Hunter, J. A., and Harris, J. B., 2000, Comparing shear-wave velocity profiles from MASW with borehole measurements in unconsolidated sediments, Fraser River delta, B. C., Canada: **Journal of Environmental and Engineering Geophysics**, v. 5, no. 3, p. 1-13.
- Cox, R. T., Van Arsdale, R. B., Harris, J. B., and Larsen, D., 2001, Neotectonics of the southeastern Reelfoot rift zone margin, central United States, and implications for regional strain accommodation: **Geology**, v. 29, p. 419-422.
- Cox, R. T., Van Arsdale, R. B., and Harris, J. B., 2001, Identification of possible Quaternary deformation in the northeastern Mississippi Embayment using quantitative geomorphic analysis of drainage-basin asymmetry: **Geological Society of America Bulletin**, v. 113, p. 615-624.
- Street, R., Woolery, E. W., Wang, Z., and Harris, J. B., 2001, NEHRP soil classifications for estimating site-dependent seismic coefficients in the Upper Mississippi Embayment: **Engineering Geology**, v. 62, p. 123-135.
- Xia, J., Miller, R. D., Park, C. B., Hunter, J. A., Harris, J. B., and Ivanov, J., 2002, Comparing shear-wave velocity profiles inverted from multichannel surface wave with borehole measurements: **Soil Dynamics and Earthquake Engineering**, v. 22, p. 181-190.
- Hunter, J. A., Benjumea, B., Harris, J. B., Miller, R. D., Pullan, S. E., Burns, R.A., and Good, R. L., 2002, Surface and downhole shear wave seismic methods for thick soil site investigations: **Soil Dynamics and Earthquake Engineering**, v. 22, p. 931-941.

- Baldwin, J. N., Barron, A. D., Kelson, K. I., Harris, J. B., and Cashman, S., 2002, Preliminary paleoseismic and geophysical investigation of the North Farrenburg Lineament: Primary tectonic deformation associated with the New Madrid North Fault?: **Seismological Research Letters**, v. 73, p. 393-413.
- Larsen, D., Gentry, R.W., Ivey, S., Solomon, D.K., and Harris, J., 2003, Groundwater leakage through a leaky confining unit beneath a municipal well field, Memphis, Tennessee, USA. In Schulz, H.D., and Hadeler, A., eds., **Geochemical Processes in Soil and Groundwater**, Wiley-VCH, Berlin, p. 51-64.
- Velasco, M., Van Arsdale, R., Waldron, B., Harris, J., and Cox, R., 2005, Quaternary faulting beneath Memphis, Tennessee: **Seismological Research Letters**, v. 76, p. 598-614.
- Baldwin, J. N., Harris, J. B., Van Arsdale, R. B., Givler, R., Kelson, K. I., Sexton, J. L., and Lake, M., 2005, Constraints on the location of the late Quaternary Reelfoot and New Madrid North faults in the northern New Madrid seismic zone, central United States: **Seismological Research Letters**, v. 76, p. 772-789.
- Cox, R. T., Cherryhomes, J., Harris, J. B., Larsen, D., Van Arsdale, R. B., Forman, S. L., 2006, Paleoseismology of the southeastern Reelfoot Rift in western Tennessee and implications for intraplate fault zone evolution: **Tectonics**, v. 25, TC3019, 17 pp.
- Baldwin, J. N., Witter, R. C., Vaughn, J. D., Harris, J. B., Sexton, J. L., Lake, M., Forman, S. L., and Baron, A. D., 2006, Geological characterization of the Idalia Hill Fault Zone and its structural association with the Commerce Geophysical Lineament, Idalia, Missouri: **Bulletin of the Seismological Society of America**, v. 96, p. 2281-2303.
- Waldron, B. A., Harris, J. B., Larsen, D., and Pell, A., 2009, Mapping an aquitard breach using shear-wave seismic reflection: **Hydrogeology Journal**, v. 17, n. 3, p. 505-517.
- Harris, J. B., 2009, Hammer-impact SH-wave seismic reflection methods in neotectonic investigations: General observations and case histories from the Mississippi Embayment, U.S.A.: **Journal of Earth Science**, v. 20, n. 3, p. 513-525.
- Harris, J. B., 2010, Application of shallow shear-wave seismic reflection methods in earthquake hazards studies: **The Leading Edge**, v. 29, n. 8, p. 960-963.
- Sloan, S. D., and Harris, J. B., 2010, Shallow seismic investigation of surface deformation associated with the Kilmichael dome, Montgomery County, Mississippi, USA: **Near Surface Geophysics**, v. 8, p. 451-457.
- Van Arsdale, R. B., Arellano, D., Stevens, K. C., Hill, A. A., Lester, J. D., Parks, A. G., Csontos, R. M., Rapino, M. A., Deen, T. S., Woolery, E. W., and Harris, J. B., 2012, Geology, geotechnical engineering, and natural hazards of Memphis, Tennessee, USA: **Environmental & Engineering Geoscience**, v. XVIII, n. 2, p. 113-158.

- Cox, R. T., Harris, J., Forman, S., Brezina, T., Gordon, J., Gardner, C., and Machin, S., 2012, Holocene faulting on the Saline River fault zone, Arkansas, along the Alabama-Oklahoma transform, *in* Cox, R.T., Tuttle, M.P., Boyd, O.S., and Locat, J., eds., Recent Advances in North American Paleoseismology and Neotectonics East of the Rockies:

  Geological Society of America Special Paper 493, p. 143-164.
- Crane, J. M., Lorenzo, J. M., and Harris, J. B., 2013, A new electrical and mechanically detonatable shear wave source for near surface (0-30 m) seismic acquisition: **Journal of Applied Geophysics**, v. 91, p. 1-8.
- Vanderlip, C.A., Cox, R. A., Larsen, D., Mitchell, J., Harris, J. B., and Cearley, C. S., 2021, Newly recognized Quaternary surface faulting and folding peripheral to the New Madrid Seismic Zone, Central United States, and implications for restraining bend models of intraplate seismic zones: **The Journal of Geology**, v. 129, n. 1, p. 77-95.
- Hunter, J. A., Crow, H. L., Stephenson, W. J., Pugin, A. J.-M., Williams, R. A., Harris, J. B., Odum, J. K., and Woolery, E. W., 2022, Seismic site characterization with shear wave (SH) reflection and refraction methods: **Journal of Seismology**, v. 26, p. 631-652.

#### PUBLICATIONS (Reports, Conference Proceedings, Expanded Abstracts, Book Chapters):

- Harris, J. B., and Street, R. L., 1989, Morphology of a sub-Pennsylvanian paleochannel using common-offset seismic data: **59th Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts**, p. 457-459.
- Harris, J. B., and Street, R. L., 1991, Integrated seismic site characterization of the Paducah, Kentucky, area: Preliminary results: **Proceedings of the 4th Symposium on the Application of Geophysics to Engineering and Environmental Problems**, p. 24-37.
- Harris, J. B., and Street, R. L., 1991, Estimating site amplification effects using shallow seismic data: 61st Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts, p. 584-587.
- Woolery, E. W., Street, R. L., Harris, J. B., and Wang, Z., 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.
- Harris, J. B., Street, R. L., Kiefer, J. D., Allen, D. L., and Wang, Z. M., 1993, Microzonation and site amplification of seismic ground motions in the Paducah, Kentucky, area: **Proceedings of the 1993 National Earthquake Conference**, May 3-5, 1993, Memphis, Tennessee, p. 215-224.
- Harris, J. B., Hunter, J. A., Luternauer, J. L., and Finn, W. D. L., 1995, Site response modelling of the Fraser River delta, British Columbia: Preliminary results from two deep boreholes: *In* **Current Research 1995-E**, Geological Survey of Canada, p. 69-75.
- Britton, J. R., Harris, J. B., Hunter, J. A., and Luternauer, J. L., 1995, The bedrock surface beneath the Fraser River delta in British Columbia based on seismic measurements: *In* **Current Research 1995-E**, Geological Survey of Canada, p. 83-89.

- Harris, J. B., Hunter, J. A., Luternauer, J. L., and Finn, W. D. L., 1995, Site amplification modelling of the Fraser delta, British Columbia: Proceedings of the 48th Canadian Geotechnical Conference, September 25-27, 1995, Vancouver, B.C., p. 947-954.
- Hunter, J. A., Harris, J. B., and Britton, J. R., 1996, Compressional and shear wave interval velocity data for Quaternary sediments in the Fraser River delta from multichannel seismic reflection surveys: **Geological Survey of Canada, Open File Report 3325**, 228 p.
- Harris, J. B., Hunter, J. A., Pullan, S. E., Burns, R. A., and Good, R. L., 1996, Shallow shear wave seismic reflection profiling in the Fraser River delta, British Columbia: 66<sup>th</sup> Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts, p. 865-868.
- Harris, J. B., Hillman, R. A., Hunter, J. A., and Luternauer, J. L., 1997, Seismic reflection profiling in support of a deep borehole, Fraser River delta, British Columbia: *In* Current Research 1997-E, Geological Survey of Canada, p. 13-18.
- Harris, J. B., Berman, S. A., Beard, W. C., Street, R. L., and Cox, R. T., 1998, Shallow seismic reflection investigations of neotectonic activity in the Lower Mississippi Valley: 68<sup>th</sup>
   Annual International Meeting of the Society of Exploration Geophysicists,
   Expanded Abstracts, p. 848-851.
- Langston, C., McIntyre, J., Street, R., and Harris, J., 1998, Investigation of the shallow subsurface near the Paducah Gaseous Diffusion Plant using SH-wave seismic methods: **68**<sup>th</sup> **Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts**, p. 878-880.
- Hunter, J. A., Christian, H. A., Harris, J. B., Britton, J. R., and Luternauer, J. L., 1999, Mapping shear wave velocity structure beneath the Fraser River delta sediments Preliminary results: **Proceedings of the 8<sup>th</sup> Canadian Conference on Earthquake Engineering**, June 13-18, 1999, Vancouver, B. C.
- Park, C. B., Miller, R. D., Xia, J., Hunter, J. A., and Harris, J. B., 1999, Higher mode observation by the MASW method: **69**<sup>th</sup> **Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts**, p. 524-527.
- Xia, J., Miller, R. D., Park, C. B., Hunter, J. A., and Harris, J. B., 1999, Evaluation of the MASW technique in unconsolidated sediments: **69**<sup>th</sup> **Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts**, p. 437-440.
- Harris, J. B., Miller, R. D., Xia, J., Hunter, J. A., Park, C. B., Laflen, D. R., and Good, R. L., 2000, Near-surface shear wave reflection surveys in the Fraser River delta, B.C., Canada: 70<sup>th</sup> Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts.
- Hunter, J. A., Benjumea, B., Harris, J. B., Miller, R. D., Pullan, S. E., Burns, R. A., and Good, R. L., 2001, Surface and downhole shear wave seismic methods for thick soil site investigations: **Proceedings, Tenth International Conference on Soil Dynamics and Earthquake Engineering (SDEE2001)**, October 7-10, 2001, Philadelphia, Pennsylvania.

- Miller, R. D., Xia, J., Park, C. B., Hunter, J. A., Harris, J. B., and Ivanov, J., 2001, Comparing shear-wave velocity profiles inverted from multichannel surface wave with borehole measurements: **Proceedings, Tenth International Conference on Soil Dynamics and Earthquake Engineering (SDEE2001)**, October 7-10, 2001, Philadelphia, Pennsylvania.
- Baldwin, J. N., Barron, A. D., and Harris, J. B., 2002, Geophysical and paleoseismic investigation of the Commerce Geophysical Lineament at Holly Ridge, Idalia, Missouri:
   Final Technical Report, U.S. Geological Survey, FY 2001 National Earthquake Hazards Reduction Program, Award #01-HQGR-0055, 36 p.
- Harris, J. B., 2002, Shallow seismic reflection investigations of the Big Creek fault zone and its extension into the Memphis, Tennessee, area: Collaborative research with Mississippi Mineral Resources Institute, University of Mississippi: **Annual Technical Report, U.S. Geological Survey**, FY 2002 National Earthquake Hazards Reduction Program, Award #02-HQGR-0031, 5 p.
- Larsen, D., Gentry, R. W., Ivey, S., Solomon, D. K., and Harris, J., 2002, Groundwater leakage through a leaky confining unit beneath a municipal well field, Memphis, Tennessee, USA: **Proceedings from GEOPROC2002**, March 4-7, 2002, Bremen, Germany.
- Van Arsdale, R., Cox, R., and Harris, J., 2003, Investigation of faulting beneath the city of Memphis and Shelby County, Tennessee: Final Technical Report, U. S. Geological Survey, FY 2002 National Earthquake Hazards Reduction Program, Award #02-HQGR-0053, 33 p.
- Baldwin, J.N., Witter, R.C., Vaughn, J.D., Harris, J.B., Sexton, J., Lake, M., and Forman, S., 2004, Paleoseismic investigation of the Idalia Hill fault along the Commerce geophysical lineament, Idalia, Missouri: **Final Technical Report, U. S. Geological Survey**, FY 2003 National Earthquake Hazards Reduction Program, Award #03-HQGR-0095, 94 p.
- Pell, A. B., Harris, J. B., and Waldron, B. A., 2005, Seismic reflection imaging of suspected "windows" in the upper confining unit of the Memphis (Tennessee) Aquifer: **Proceedings of the 18<sup>th</sup> Annual Meeting, Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP 2005)**, p. 797-805.
- Harris, J. B., 2005, Observation of shear-wave splitting in Quaternary sediments of the New Madrid seismic zone: An indicator of in-situ stress conditions?: **Proceedings of the 18<sup>th</sup> Annual Meeting, Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP 2005)**, p. 952-958.
- Harris, J. B., 2005, Observation of shear-wave splitting in Quaternary sediments of the New Madrid seismic zone (central USA): An indicator of in-situ stress conditions?: **Extended Abstracts, 11<sup>th</sup> European Meeting of Environmental and Engineering Geophysics** (**EAGE Near Surface 2005**), September 4-7, 2005, Palermo, Italy, 4 pp.

- Harris, J. B., 2006, Hammer-impact shear-wave seismic reflection methods in neotectonic investigations: General observations and case histories from the Mississippi Embayment, U.S.A.: Geophysical Solutions for Environment and Engineering, Volume 1, Proceedings of the 2<sup>nd</sup> International Conference on Environmental and Engineering Geophysics (ICEEG 2006), June 4-9, 2006, Wuhan, China, p. 24-33.
- Harris, J. B., and Sorrells, J. L., 2006, Shear-wave seismic reflection images of the Big Creek fault zone near Helena, Arkansas: **76**<sup>th</sup> **Annual International Meeting of the Society of Exploration Geophysicists, Expanded Abstracts**, p. 1500-1505.
- Baldwin, J. N., Givler, R., Brossy, C. C., Elliott, E. T., and Harris, J. B., 2008, Geophysical and paleoseismic evaluation of the Penitentiary Fault and its association with the Commerce Geophysical Lineament, Tamms, Southern Illinois: **Final Technical Report, U. S. Geological Survey**, FY 2006 National Earthquake Hazards Reduction Program, Award #06-HQ-GR0138, 51 p.
- Harris, J. B., Smolkin, D. E., Butler, D. T. III, and Galicki, S. J., 2009, Shallow shear-wave seismic characterization of a Pleistocene gravel deposit, Yazoo County, Mississippi:

  Proceedings of the 22<sup>nd</sup> Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP 2009), p. 579-585.
- Pullan, S. E., Hunter, J. A., Harris, J. B., Crow, H. L., and Pugin, A. J.-M., 2012, Shear wave reflection techniques for hazard studies: *in* Shear Wave Velocity Measurement Guidelines for Canadian Seismic Site Characterization in Soil and Rock, (ed.) J. A. Hunter and H. L. Crow; **Geological Survey of Canada, Open File 7078**, p. 35-48.
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Geophysical Imaging of the Big Ridge escarpment, Jackson County, Mississippi: Gulf Coast Association of Geological Societies, Student Research Grant (for Jared Bullock): 2016-2017.

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