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Education

Ph.D., Geophysics, 1989 Geophysical Institute, University of Alaska Fairbanks
M.A., English Literature, 1976 State University of New York at Binghamton
B.A., English Literature, 1974 State University of New York at Binghamton

Professional Positions

Director of Undergraduate Research, Auburn Unversity	1/2011-present
Professor, Geology and Geography Department, Auburn University	2004 – present
Visiting Scholar, Earth and Space Sciences, University of Washington Seattle	1-6/2010
Associate Professor, Geology Department, Auburn University	1998-2004
Visiting Associate Professor, California Institute of Technology	1-6/1998
Assistant Professor, Geology Department, Auburn University	1993-98
Assistant Executive Director, Commission on Geosciences, Environment and	
Resources, National Research Council, National Academy of Sciences	1992-93
Program Officer, Board on Earth Sciences and Resources, National Research	
Council, National Academy of Sciences	1991-92
Postdoctoral Scholar, Air Force Geophysics Laboratory, Hanscom AFB, MA	1989-91
Lecturer, University of Wisconsin-Eau Claire	1977-79
Visiting Instructor, Lander University, SC	1976-77

Synergistic Activities and Outreach

Editor-in-chief, Auburn University Journal of Undergraduate Scholarship, 2011-present Associate Editor, Bulletin of the Seismological Society of America, 2000-2010 Institutional Representative, 2004-present, Incorporated Research Institutions for Seismology Panelist, National Earthquake Hazards Reduction program, 2010 Panelist, Major Research Instrumentation, National Science Foundation, 2009 Board of Directors, Incorporated Research Institutions for Seismology, 1994-2004 Subject Matter Specialist and Faculty, Excelsior College, Albany NY 2006-07 PI, Water Education for Alabama's Black Belt (WET), Auburn University Outreach, 2007-2009

Refereed Publications

1. Journals/Publications:

Tuttle, M. P., L. W. Wolf, P. Mayne, K. Dyer-Williams, and R. Laferty, Paleoliquefaction Studies, U.S. Nuclear Regulatory Commission, Office of Nuclear Regulatory Research, Washington DC, in review.
Hardesty, K., L. W. Wolf, P. Bodin, 2010, Noise to Signal: A Microtremor study in the New Madrid seismic zone, Geophysics, v. 75, n. 3, B83–B90 (DOI: 10.1190/1.3374357).

Andreazza, R., S. Pieniz, S. Arnold, L. Wolf, M-K. Lee, F.A.O. Camargo Flávio, , and B. C. Okeke, 2010, Characterization of copper biosorption and bioreduction by a highly copper resistant bacterium

- isolated from copper contaminated vineyard soil, *Science of Total Environment*, v. 408, n. 7, p. 1501-1507.
- Fang, Xing, N-B. Chang, M-K. Lee, and L. W. Wolf, 2010, Chapter 3: Environmental assessment of using stone quarries as part of an integrative water supply system in fast growing urban regions, *in* Ni-Bin Chang (ed.), *The Effects for Urbanization on Groundwater: An Engineering Case-based Approach for Sustainable Development*, American Society of Civil Engineers, p. 26-50.
- Lee, M-K., L. Wolf, K. Hardesty, L. Beasley, J. Smith, L. Adams, K. Stone, D. Block, 2009, Water education (WET) for Alabama's Black Belt: A hands-on field experience for middle school students and teachers, *in* S. J. Whitmeyer et al., eds., An Introduction to Historical Perspectives On and Modern Approaches to Field Geology Education, *Geological Society of America Special Papers*, v. 461, p. 253-259, doi:10.1130/2009.2461(20).
- Wolf, L. W., M. P. Tuttle, S. Browning, and S. Park, 2006, Geophysical surveys of earthquake-induced liquefaction deposits in the New Madrid seismic zone, *Geophysics*, v. 71, n.6, B223-B270.
- Wolf, L. W., M-K Lee, S. Browning, and M. Tuttle, 2005, Numerical analysis of overpressure development in the New Madrid seismic zone, *Bulletin of the Seismological Society of America*, v. 95, p. 135-144.
- Saunders, J., M-K. Lee, L. W. Wolf, C. Morton, Y. Feng, I. Thomsin, and S. Park, 2005, Geochemical, microbiological and geophysical assessments of anaerobic immobilization of heavy, *Bioremediation Journal*, v. 9, n. 1, p. 1-16.
- Lewis, R. D., and L. W. Wolf, 2003, Geocommunication: A cornerstone course in professional development, *Journal of Geoscience Education*, v. 1, n. 2, p. 244-249.
- Tuttle, M. P., E. S. Schweig, J. D. Sims, R. H. Lafferty, L. W. Wolf, and M. L. Haynes, 2002, The earthquake potential of the New Madrid seismic zone, *Bulletin of the Seismological Society of America*, v. 92, n. 6, p. 2080-2089.
- Wolf, L. W., R. C. McCaleb, D. B. Stone, T. M. Brocher, K. Fujita, S. Klemperer, 2002, Crustal Structure across the Bering Strait, Alaska: Onshore recordings of a marine seismic survey, *in* Miller, E. L., A. Grantz and S. L. Klemperer (eds.), *Tectonic evolution of the Bering Shelf-Chukchi Sea-Arctic Margin and adjacent landmasses*, Geol. Soc. Am. Spec. Paper 360, p. 25-37.
- Lee, M-K., J. A. Saunders, and L. W. Wolf, 2000, Effects of geologic heterogeneities on pump and treat and in situ bioremediation: A stochastic analysis, *Environmental Engineering Science*, v. 17, n. 3, p. 183-189.
- Tuttle, M.P., J. Collier, L.W. Wolf, R.H. Lafferty, 1999, New evidence for a large earthquake in the New Madrid seismic zone between A.D. 1400 and 1670, *Geology, v. 27,* p. 7771-774.
- Gomberg, J., and L. Wolf, 1999, A possible cause for an improbable earthquake: The 1997, Mw 4.9 southern Alabama earthquake and hydrocarbon recovery, *Geology, v. 27*, p.367-370.
- Wolf. L.W., J. Collier, P. Bodin, and M. Tuttle, 1998, Geophysical reconnaissance of earthquake-induced liquefaction features in the New Madrid Seismic Zone, *Journal of Applied Geophysics*, v. 39, p.121-129.
- Lee, M-K., and L.W. Wolf, 1998, Analysis of fluid pressure propagation in heterogeneous rocks: Implications for hydrologically induced earthquakes, *Geophysical Research Letters*, v. 25, p. 2329-2332.
- Wolf, L.W., C.A. Rowe and R.B. Horner, 1997, Periodic seismicity from the Mt. Ogden on the British Columbia/Alaska border: A case for hydrologically induced seismicity? *Bulletin of the Seismological Society of America*, v. 87, p. 1473-1483.
- Brocher, T.M., R.M. Allen, D.B. Stone, L.W. Wolf, B.K. Galloway, 1996, Data report for onshore-offshore wide-angle seismic recordings in the Bering-Chukchi sea, western Alaska and eastern Siberia, *U.S. Geol Surv. Open File Rep 95-650*, 57 pp.
- Wolf, L.W. and J.J. Cipar, 1993, Through thick and thin: A new model for the Colorado Plateau from PACE seismic refraction data, *J. Geophysical Research.*, v.98, p. 19,881-19,894.

- Wolf, L.W. and D.B. Stone and J.N. Davies, 1991, Crustal structure of the active margin, southcentral Alaska: An interpretation of seismic refraction data from the Trans-Alaska Crustal Transect, *J. Geophysical Research*, v.96, p. 16,455-16,470.
- Wolf, L.W. and A.R. Levander, 1989, Upper crustal structure of the accreted Chugach terrane, Alaska, *J. Geophysical Research*, v.94, p. 4457-4466.
- Wolf, L.W. and J.N. Davies, 1986, Glacier-generated earthquakes from Prince William Sound, Alaska, *Bulletin of the Seismological Society of America*, v.76, p. 367-379.
- Davies, J.N., L.W. Wolf and C. Rowe, 1986, Seismic exposure of the Makushin site, Unalaska, *Alaska DNR Div of Geological and Geophysical Surveys, Public Data File 86-60*.
- Wolf, L.W. and J.N. Davies, 1986, A comparison of acceleration values derived from recent seismic hazard studies of the Anchorage area, Alaska: Part 1, Alaska DNR Div of Geological and Geophysical Surveys, Public Data File 86-85.

2. Other refereed professional contributions:

- Committee on Geophysical Data, 1993, 1992 Review of the World Data Center-A for Rockets and Satellites and the National Space Science Data Center, Wolf, L. W. (study director), National Research Council, National Academy Press, Washington, DC, 80 pp.
- Committee on Geophysical Data, 1992, 1992 Data Forum, Wolf, L. W. (study director), National Research Council, National Academy Press, Washington, DC, 60 pp.
- Committee on Geophysical Data, 1991, Solving the Global Change Puzzle: A U.S. Strategy for Managing Data and Information, Wolf, L. W. (study director), National Research Council, National Academy Press, Washington, DC, 52 pp.

3. Other refereed NRC professional contributions for which Wolf had editorial responsibilities**:

Solid Earth Sciences and Society

National Geomagnetic Initiative

Toward a Coordinated Spatial Data Infrastructure for the Nation

Science and Stewardship in the Antarctic

Application of Analytical Chemistry to Oceanic Carbon Cycles

Oceanography in the Next Decade: Building New Partnerships

Groundwater Vulnerability Assessment: Predicting Relative Contamination

Potential Under Conditions Of Uncertainty

Sustaining Water Resources

Managing Wastewater in Coastal Urban Areas

In-Situ Bioremediation: When Does it Work

** Wolf assumed editorial responsibilities for ten (10) National Research Council committee publications in 1993. These responsibilities were similar to those of a journal editor and included 1) assisting with referee selection, 2) overseeing the referee review process, and 3) minor editing to meet NRC standards.

Published proceedings, guidebooks and book reviews

Fang, X., N-B. Chang, M-K. Lee, and L.W. Wolf, 2009, Environmental Impacts on Surface Water and Groundwater for Expanding Urban Water Supply Capacity Using Stone Quarries, *EWRI2009* conference proceedings.

- Hardesty, K., L. W. Wolf, P. Bodin, 2008, Noise to Signal: A Microtremor study in the New Madrid seismic zone in Proceedings of the Symposium on the Application of Geophysics to Environmental and Engineering Problems, Environmental and Engineering Geophysics Society, Tulsa, OK, 9p.
- Cramer, C. H. and L. W. Wolf, 2007, Deep Drill Hole for the New Madrid Seismic Zone, *EOS Transactions American Geophysical Union*, v. 88, n. 43, 23 October 2007.
- Wolf, L. W., S. Park, S. Browning, and M. Tuttle, 2004, Locating earthquake-induced liquefaction deposits at Native American cultural sites using non-invasive geophysical surveys, in Proceedings of the Symposium on the Application of Geophysics to Environmental and Engineering Problems, Environmental and Engineering Geophysics Society, Colorado Springs, CO.
- M.-K. Lee, J. A. Saunders, L. W. Wolf, S. Park, and J. Hansom, 2003, Modeling of a field experiment on bioremediation of metals contaminated groundwater, Proceedings MODFLOW and More 2003, v. 2, p. 794-798, Sept. 16-19, CO School of Mines.
- M.-K. Lee, J. A. Saunders, L. W. Wolf, 2003, Simulations of metals attenuation processes related to field bioremediation of acidic groundwater, Proceedings, 11th Annual David S. Snipes/Clemson Hydrogeology Symposium, p. 11-15, April 2-4, Clemson University.
- Wolf, L. W., 2002, *Looking into the Earth* [published book review], *EOS Transactions, American Geophysical Union, v. 83, n. 33,* 361, 10.1029/2002E0000265.
- Wolf, L. W., 2001, 3-D Seismic Interpretation: A primer for geologists [published book review], Palaios, v. 16, p. 531-532.
- Wolf, L.W., M.G. Steltenpohl and J. Plescia, 1997, Geophysical investigation of a "suspect" impact crater in Wetumpka, Alabama, *in* Neathery, T. L., D. T. King, Jr., and L. W. Wolf, *The Wetumpka Impact Structure and Related Features*, Southeastern Section of the Geological Society of America Field Trip Guidebook, 57-68.
- Lee, M-K., J.A. Saunders, and L.W. Wolf, 1997, Stochastic analysis of *in situ* bioremediation within heterogeneous porous medium, *in Proc 4th International Symposium on In Situ and On Site Bioremediation, New Orleans, LA, v. 5,* 583-588.
- Saunders, J.A., R.C. Thomas, M-K. Lee, and L.W. Wolf, 1997, Geologic evidence for utility of using sulfate-reducing bacteria for *in situ* anaerobic bioremediation of heavy metal contaminant groundwater, *in Proc 4th International Symposium on In Situ and On Site Bioremediation, New Orleans, LA, v. 3,* 379-384.
- Wolf, L.W., and J.J. Cipar, 1994, Tectonic implications of seismic refraction/wide-angle reflection models of the Colorado Plateau, *ILIAD Workshop Proceedings*, Taos, NM.
- Tuttle, M., P. Cowie and L. Wolf, 1991, Liquefaction induced by modern earthquakes as a key to paleoseismicity: A case study of the 1988 Saguenay event, *Proceedings of the Water Reactor Safety Meeting*, Nuclear Regulatory Commission, October 1991, Rockville, MD.

Published abstracts of papers presented at professional meetings

- Taylor, J. P., and L. W. Wolf, 2012. Implications of gravitational anomalies within sedimentary basins of Northwest Washington, GSA Abstracts with Programs, Abstract no. 24-10.
- Bajgain, S. K., Wolf, L. W., Steltenpohl, M. G., 2011. Gravity and Magnetic Modeling of Basement Rocks Beneath Alabama and the Gulf Coastal Plain, 2011 Fall Meeting AGU, San Francisco, CA, Abstract no. GP41A-0983.
- Robbins, E A, L. W. Wolf, and D. King, 2011. Gravity modeling of the Wetumpka impact crater, Alabama. GSA Abstracts with Programs, Vol. 41, Geological Society of America, Southeastern Section Meeting.
- Robbins, E. A., D. King, and L. Wolf, 2011. Wetumpka impact structure (Alabama) a gravity model. Lunar and Planetary Science Conference abstracts, V. 42, Lunar and Planetary Science Meeting.

- Bajgain, S. K., Wolf, L. W., Steltenpohl, M. G., 2011. Gravity and magnetic modeling to the basement beneath Alabama Gulf coastal plain, GSA Abstracts with Programs Vol. 43, No. 2, Abstract No: 185818.
- Graham, D., L. W. Wolf, and D. Elton, 2010, Self-Potential Measurements of a Pore-Water Modification Technique to Reduce Earthquake-Induced Liquefaction Susceptibility, Eos Trans. AGU, Fall Meeting, Abstract NS23A-1457.
- Wolf, L. W., and D. Bose, 2010, A Study of the Spectral Stability of Microtremors in the Los Angeles Basin, California, Eos Trans. AGU, Fall Meeting, Abstract S43B-2060NS23A-1457.
- Bose, D., and Wolf, L. W., 2010, A microtremor study in the Los Angeles basin, California, GSA Abstracts with Programs Vol. 42, No. 5, Paper No. 180643169-4.
- Bose, D. and L. W. Wolf, 2010, Applications of the Microtremor method: Los Angeles basin, AAPG Student Expo.
- Wolf, L. W., Lee, M., Meir, A., Dyer, G., 2010, PFLOW: A 3-D numerical modeling tool for calculating fluid pressure diffusion, Seismological Society of America, Annual Meeting, Abstract 6612.
- Wolf, L. W., Lee, M., Meir, A., Dyer, G., Ma, K., and Chan, C., 2009, PFLOW: A 3-D numerical modeling tool for calculating fluid pressure diffusion from Coulomb strain, Eos Trans. AGU, 90 (52), Fall Meet. Suppl. Abstract S51C-1439.
- Bose, D., and Wolf, L. W., 2009, Limitations of the microtremor method: A study in the Los Angeles basin, California, Eos Trans. AGU, 90 (52), Fall Meet. Suppl. Abstract S43A-1953.
- Wolf, L. W., Hardesty, K., and Bodin, P., 2009, A microtremor study in the New Madrid seismic zone, Central and Eastern U.S. (CEUS) Hazards Program meeting (*invited participant*).
- Dyer, G., Lee, M.-K., Wolf, L., W., and Meir, A.J., 2009, Applications of coupled mechanical deformation-pore pressure diffusion modules to overpressure and petroleum systems in the Delaware Basin, west Texas, AAPG Annual Meeting.
- Bose, D., and Wolf, L. W., Limitations of the microtremor method: A case study in the Los Angeles basin, California, GSA Abstracts with Programs Vol. 41, No. 7, Paper No. 169-4.
- Fang, X., Chang, N., Lee, M.-K., and Wolf, L.W., 2009, Environmental impacts on surface water and groundwater for expanding urban water supply capacity using stone quarries, World Environmental and Water Resources Congress, Kansas City, Missouri, May 17-21.
- Lee, M.-K., and Wolf, L.W., 2009, Water education for Alabama Black Belt (WET): Hands-on laboratory and field exercises for K-12 students and teachers, Auburn University Outreach Scholarship Symposium (invited talk), April 2009.
- Dyer, G., Lee, M.-K., Wolf, L., W., and Meir, A.J., 2009, Numerical models of fluid-pressure changes resulting from the 1999 Chi-Chi earthquake, Taiwan, GSA Abstracts with Programs Vol. 41, No. 7, Paper No. 170-14.
- Beasley, L., Monrreal, R., Lee, M.-K., Wolf, L.W., and Marzen, L., 2009, Hydrology and water chemistry controls on mercury bioaccumulation in Alabama coastal watersheds, GSA Annual Meeting, Southeastern Section.
- Palmer, B., Wolf, L.W., Cook, R., Lee, M.-K., 2009, Geophysical field study of karst and solution features near an aggregate site in Alabama, GSA Annual Meeting, Southeastern Section.
- Wolf, L. W., M.-K. Lee, K. Stone, 2008, <u>Water EducaTion</u> for Alabama's Black Belt (WET Alabama): Facilitating Scientific Understanding of the Hydrologic Cycle in Low-Resource Schools, *EOS Trans. American Geophysical Union*, v. 89, Fall Meeting Suppl., Abstract ED21A-0603.
- M-K. Lee, L. Wolf, K. Hardesty, L. Beasley, J. Smith, L. Adams, K. Stone, and D. Block, 2008, Water Education for Alabama's Black Belt (WET): Hands-on Laboratory and Field Exercises for K-12 Students and Teachers, *GSA Abstracts with Programs*, Vol. 40, Paper No. 348-8.

- Hardesty, K., L. W. Wolf, P. Bodin, 2008, Noise to Signal: A Microtremor study in the New Madrid seismic zone, Society of Environmental and Engineering Geophysics (SAGEEP) meeting, Philadelphia, PA, April 2008.
- Savrda, A. M., M. G. Steltenphol, and L. W. Wolf, 2008, Establishing tighter constraints on the structural configuration of basement rocks beneath the Alabama Gulf Coastal Plain through modeling, *GSA Abstracts with Programs*, Vol. 40, Paper No. 143-1.
- Hardesty, K., L. W. Wolf, and P. Bodin, 2008, Using microtremor data for hazards assessment in areas of earthquake-induced liquefaction: A case study in the New Madrid seismic zone, Seismological Research Letters, Annual Meeting, Santa Fe, NM.
- Hardesty, K., L. W. Wolf, and P. Bodin, 2007, A Microtremor Study in the New Madrid Seismic Zone, *EOS Transactions American Geophysical Union*, v. 88, Fall Meeting Suppl.. Abstract 2730.
- Wolf, L. W., C. A. Langston, C. A. Powell, C. Cramer, A, Johnston, A. Hill, and the FOCUS Steering Committee, 2007, FOCUS: Fault Observatory for the Central United States, *EOS Transactions American Geophysical Union*, v. 88, Fall Meeting Suppl., Abstract 11884.
- Savrda, A., C. Settlemire, L. W. Wolf, and M-K. Lee, 2007, Geochemistry and bioremediation of mining contaminated water in the Black Warrior coal basin, northern Alabama, *GSA Abstracts with Programs*, Paper No. 117-4.
- Hardesty, K., L. W. Wolf, and P. Bodin, 2007, Assessing site characteristics in the New Madrid seismic zone using microtremors, *GSA Abstracts with Programs*, *Southcentral Section meeting*, Paper No. 120174.
- Savrda, A., L. W. Wolf, V. Cammerata, M-K. Lee, and M. Liles, 2007, Monitoring bioremediation of acid-maine drainage using geophysical methods, Auburn University Undergraduate Research Conference, Auburn AL.
- Savrda, A., C. Settlemire, L. W. Wolf, and M-K. Lee, 2007, Geochemistry and bioremediation of mining contaminated water in the Black Warrior coal basin, northern Alabama, NRMDI Water Resources Conference, Auburn University, AL.
- Monrreal, R., M-K. Lee, and L. W. Wolf, 2007, Hydrology, water chemistry and mercury methalation in Weeks Bay, Alabama, NRMDI Water Resources Conference, Auburn University, AL.
- Saunders, J.A., Lee, M.-K., Wolf, L.W., Park S., 2007, Anaerobic Bioremediation of Metals-Contaminated Groundwater, NRMDI Water Resources Conference, Auburn University, AL.
- Savrda, A., L. W. Wolf, V. Cammerata, M-K. Lee, and M. Liles, 2007, Monitoring bioremediation of acidmine drainage using geophysical methods, Auburn University Environmental Institute Research Conference, Auburn AL.
- Wolf, L. W., M-K. Lee, and P. Baird, 2006, Poroelastic Modeling of the Mw 7.6 Chi-Chi, Taiwan, Earthquake, *Eos Trans. AGU, 87*(52), Fall Meet. Suppl., Abstract T32A-03
- Monrreal, R., Lee. M-K, and L. W. Wolf, 2006, Hydrology, water chemistry and mercury methalation in Weeks Bay, Alabama, *GSA Abstracts with Programs* v 38, p. 224.
- Monrreal, R., Lee. M-K., and L. W. Wolf, 2006, Hydrogeochemistry and mercury methylation in Weeks Bay, Alabama, Alabama Water Resources Conference, Sept. 6-8, Orange Beach, AL.
- Wolf, L. W., 2006, Seismic velocity structure of accretionary terranes in southcentral Alaska, Chapman conference on active tectonics and seismic potential of Alaska, Anchorage, AK.
- Lee, M-K., Baird, P., Wolf, L.W., Affane, C., Meir, A.J., Jean, J., Wang, C., 2006, Numerical analysis of poroelastic processes in crustal rocks and alluvial sediments during strong earthquakes, Western Pacific Geophysical Meeting, Beijing, China.
- Wolf, L. W., M-K. Lee, and P. Baird, 2006, Numerical modeling of poroelastic responses to the 1999 Chi-Chi earthquake, IRIS Annual Workshop, Tucson, AZ.

- Hansom, J., Lee, M-K., Wolf, L. W., and Kosuwan, T., 2005, Overpressure generation and episodic dewatering in the Delaware basin, western Texas: The dual nature of a fault zone, *AGU/SEG Joint Assembly, Spring meeting Suppl*.
- Park, S., Wolf, L. W., Lee, M.-K., Saunders, J. A., 2004, Self-potential and geochemical measurements of microbially mediated sulfate reduction in saturated sediments, *EOS Transactions American Geophysical Union*, v. 85, Fall meeting Suppl.
- Wolf, L. W., M-K. Lee, S. Browning, and M. Tuttle, 2004, Numerical Analysis of overpressure, in *Earthscope Science for Mid-America*, NSF Workshop (invited participant), Memphis, TN.
- Wolf, L. W., S. Park, S. Browning, M. Tuttle, 2004, Locating buried earthquake-induced liquefaction deposits at Native American cultural sites using non-invasive geophysical methods, *Symposium on the Application of Geophysics to Environmental and Engineering Problems,* February 2004, Colorado Springs, CO.
- Wolf, L. W., M-K. Lee, S. Browning, and M. Tuttle, 2003, Overpressure development in a sedimentary basin and its relation to earthquake-induced liquefaction deposits, *Seismological Research Letters*, v. 74, n. 2, p. 238.
- Park, S., Wolf, L. W., Lee, M-K., and Saunders, J., 2003, Effects of bacterial sulfate reduction in saturated sediments on self-potential and magnetic measurements, *EOS Transactions American Geophysical Union, v. 84, n. 46,* H31B-0451.
- Wolf, L., M-K. Lee, J. Saunders, C. Morton, Y. Feng, and S. Park, 2003, Geochemical, microbiological, and geophysical assessments of anaerobic bioremediation of heavy metals in groundwater, *GSA Abstracts with Programs*, v. 35, n. 6, 216-2.
- Mohammed, S., J. Saunders, M-K Lee, L. Wolf, and E. Roden, 2003, Naturally occurring arsenic in a Holocene alluvial aquifer and its implications for biogeochemical linkage among arsenic, iron, and sulfur from source to sink, *GSA Abstracts with Programs*, *v.35*, *n. 6*, 99-14.
- Lee, M.-K., J. A. Saunders, L. W. Wolf, S. Park, and J. Hansom, 2003, Modeling of a field experiment on bioremediation of metals-contaminated groundwater, Proceeding MODFLOW and More 2003, v. 2, p. 794-798, Sept. 16-19, Colorado School of Mines.
- Browning, S., L. W. Wolf, M-K Lee, 2002, Numerical analysis of gravity flow and overpressure development: implications for liquefaction susceptibility in the New Madrid Seismic Zone, *EOS Transactions American Geophysical Union*, v. 83, n. 47, G51A-0943.
- Wolf, L. W., M. P. Tuttle, S. Browning, 2001, No stone turned: Non-invasive geophysical surveys at liquefaction sites in the New Madrid Seismic Zone, *EOS Transactions*, *AGU*, *v.82*, F935.
- Lee, M-K., C-H. Wang, H. Kao, L. W. Wolf, 2001, Numerical analysis of coseismic and postseismic hydrologic processes of the 1999 Chi-Chi-earthquake, *EOS Transactions, AGU, v.82*, F479.
- Saunders, J. A., M-K. Lee, L. W. Wolf, S. Park, C. Rutherford, 2001, *In situ* groundwater remediation using sulfate-reducing bacteria at Sanders lead site, Troy, Alabama, AL Water Resources annual meeting, 5-7 Sept 2001, Orange Beach, AL.
- Lee, M-K., J. A. Saunders, and L. W. Wolf, 2000, Effects of geologic heterogeneities on pump and treat and in situ bioremediation: A stochastic analysis, *Environmental Engineering Science*, 17, p.183-189.
- Saunders, J. A, M. A. Pritchett, M-K. Lee, L. W. Wolf, 2000, Weathering of biotite in the southern Appalachians as a source of arsenic in the hydrosphere: Implications for the Himalayas and Bangladesh, *EOS Transactions*, *AGU*, *v.81*, F552.
- Barnes, A., M. Tuttle, L. Wolf, R. Lafferty, W. Hoyt, and E, Schweig, 1999, Evidence for two prehistoric earthquakes in the New Madrid seismic zone, *Seis. Research Letts*.
- King, David. T., Jr., T. L. Neathery, L. W. Petruny, C. Koeberl, W. E. Hames, and L. W. Wolf, 1999, Evidence of meteoritic impact and crater-filling stratigraphy, Wetumpka Crater, Alabama, *International Geological Congress Abstracts*, Rio de Janiero, August 1999.

- King, David. T., Jr., T. L. Neathery, L. W. Petruny, C. Koeberl, W. E. Hames, and L. W. Wolf, 1999, Evidence of meteoritic impact, crater-filling stratigraphy, and collateral effects of impact at Wetumpka Crater, Alabama, GSA Abstracts with Programs, v. 31, no. 7, #50205.
- Grant, T., L. W. Wolf, and M-K. Lee, 1999, Field investigation of a closed sanitary landfill in Tuskegee, Alabama, , *EOS Transactions, AGU, v.80,* F312.
- McCaleb, R. C., K. Fujita, and L. W. Wolf, 1998, Crustal models of the Hope Basin, Chukchi Sea, Alaska, from gravity data, *EOS Transactions, AGU, v.79,* F808.
- Gomberg, J., L. Wolf, D. Raymond, R. Raymond, A. Barnes, and 9 others, 1998, A noteworthy earthquake in an unlikely place, *Seis. Res. Lett.*, v. 69, 175.
- Wolf, L. W., A. G. Hall, M. G. Steltenpohl, and J. Plesia, 1998, Geophysical investigations of a "suspect" impact crater in Wetumpka, Alabama, *Geol. Soc. Am., Abstracts with Programs*, v 30, no. 4, p. 66.
- Wolf, L. W., D. B. Stone, K. Fujita, T. Brocher, and S. Klemperer, 1997, A crustal model of the Bering Strait: Implications for tectonic reconstructions, *EOS Transactions, AGU*.
- Collier, J. M.Tuttle, L. Wolf, E. Schweig, R. Lafferty, 1997, An integrated geological, geophysical and archaeological study of prehistoric liquefaction features in the New Madrid Seismic Zone, *Geol. Soc. Am., Abstracts with Programs*.
- Floesser, J. A., L.W. Wolf, and J.A. Saunders, 1997, Use of GIS to map groundwater chemical evolution of Coastal Plain aquifers in southeast Alabama, *Geol. Soc. Am., Abstracts with Programs, v. 29, no. 3,* 16-17.
- Collier, J., L. Wolf, K. H. Mahan, P. Bodin, and M. Tuttle, 1997, Geophysical investigations of liquefaction features in the New Madrid seismic zone, *Geol. Soc. Am., Abstracts with Programs, v. 29, no. 3,* 10.
- Wolf, L. W., C.A. Rowe, R. B. Horner, 1996, Periodic seismicity near Wright Glacier, Alaska: A case for hydrologically-triggered earthquakes? *EOS Trans AGU*, v.77, 234.
- Wolf, L., J. Collier, P. Bodin, M. Tuttle, N. Barstow, and J. Gomberg, 1996, Geophysical and geological reconnaissance of seismically-induced sand dikes and related sand blows in the New Madrid Seismic Zone, *Seismological Research Letters*, v.67, n2.
- Wolf, L.W., D. B. Stone, and K. Fujita, 1995, Deep structure of the Bering Strait region: Onshore recordings from stations in Russia and the U.S. of the 1994 Bering Shelf-Chukchi Sea seismic reflection experiment, (invited) EOS Transactions, AGU, v. 76, n.46.
- Floesser, J. A., L.W. Wolf, and J.A. Saunders, 1995, Applications of GIS for evaluating ground water geochemistry in Coastal Plain aquifers in Alabama, *Geol. Soc. Am., Abstracts with Programs, v. 27, no. 5, Nov 1995,* New Orleans, LA.
- Wolf, L.W., 1995, The role of subduction-accretion processes in the growth of continental crust, southern Alaska, (invited) *GSA Abstracts with Programs, May 1995.*
- Rowe, C., Wolf, L.W., Horner, R.B., 1994, Periodic Seismicity near Wright Glacier, SE Alaska-British Columbia border, *EOS Trans AGU*, v.75, 478.
- Wolf, L.W., and Cipar, J.J., 1991, A new crustal model of the Colorado Plateau: Results from the Pacific to Arizona Crustal Experiment, *EOS Trans AGU*, v.72, 44.
- Tuttle, M., T. Law, L. Seeber, L.W. Wolf, 1991, Paleoseismicity in the Saguenay-Larentide region of Quebec, Water Reactor Safety Meeting, Rockville, Maryland.
- Wolf, L.W., J. Cipar, S. D'Annolfo, 1991, Evaluation of crustal models of the Colorado Plateau in view of 1989 PACE seismic refraction/wide-angle reflection data, *GSA Abstracts with Programs*, Albuquerque, NM.
- Wolf, L.W., J. Cipar, S. D'Annolfo, 1990, Crustal structure across the Grand Canyon, Arizona, from PACE cross-line observations, *EOS Trans AGU*, v.71, 43.
- D'Annolfo, S., L.W. Wolf, J. Cipar, 1990, Long-range observations of PACE shots on the Colorado Plateau, *EOS Trans AGU, v.71, 43*.

- McCarthy, J., Z. Hajnal, J. Howie, R. Johnson, G. Keller and L. Wolf, 1990, PACE Lithospheric investigations of the Colorado Plateau, *EOS Trans AGU v.71, 43*.
- Wolf, L.W., J. Cipar, S. Mangino and S. D'Annolfo, 1990, Preliminary interpretation of 1989 PACE seismic refraction/wide-angle reflection data from the Colorado Plateau, Arizona, *Seismological Research Letters*, v.61, 1.
- Wolf, L.W. and D.B. Stone, 1989, Upper crustal velocity structure in a convergent margin setting, southcentral Alaska, *EOS Trans AGU*, v.70, 43.
- Wolf, L.W. and W.K. Wallace, 1988, Upper crustal structure of the Chugach and Prince William terranes, Alaska, *EOS Trans AGU*, v.69, 44.
- Wolf, L.W., A.R. Levander and G. Fuis, 1989, Upper crustal structure of the Chugach terrane, Alaska, *EOS Trans AGU*, v.67, 44.
- Wolf, L.W. and J.N. Davies, 1989, A comparison of acceleration values for Anchorage, Alaska, Geologic Hazards Symposium, Anchorage.
- Wolf, L.W., 1984, Glacier-generated seismicity in Prince William Sound, Alaska, Seismological Society of America, Anchorage, May 1984; N.W. Glaciologists Meeting, Tacoma, WA.

Invited university or public lectures and interviews

- Wolf, L. W. Effective Mentoring: Best Practices, October 2011, Professional Development Series Workshop with M. Byrne, M. Escobar, and M. Squillacote, Biggio Center.
- Wolf, L. W., Earthquakes, Capitol Journal, Alabama Public Television, April 18, 2011 (Interview)
- Wolf, L. W., Hydrologic Effects of Strong Earthquakes, April 2010, Department of Earth and Space Sciences, University of Washington, Seattle, WA
- Wolf, L. W., Just Add Water: Earthquake-Induced Liquefaction in the New Madrid Seismic Zone, May 2008, Earth and Environmental Sciences Colloquium, Los Alamos National Laboratory, NM
- Wolf, L. W., Microtremors in the New Madrid Seismic Zone, May 2008, Los Alamos National Laboratory, NM
- Wolf, L. W., FOCUS: Fault Observatory for the Central United States, USGS Workshop on Long-term Deformation in the central U.S., September 2007, Center for Earthquake Research and Information, University of Memphis TN.
- Wolf, L. W., Tsunamigenic Earthquakes, April 2005, La Grange, GA
- Wolf, L. W., The 2004 Northern Sumatra Earthquake, *For the Record*, Alabama Public Television, March 2005 (Interview)
- Wolf, L. W., Alabama earthquakes, April 2004, WFSA Evening News (Interview)
- Wolf, L. W., Just Add Water, Clemson University, March 2002, Clemson, SC
- Wolf, L. W., An Interdisciplinary Assessment of Earthquake-Related Ground Failure in the New Madrid Seismic Zone, March 1998, Michigan State University, E. Lansing.
- Wolf, L. W., The Mt. Ogden Swarms: A Case for Hydrologically Triggered Earthquakes? March 1998, Michigan State University, E. Lansing.
- Wolf, L. W., Studies of Earthquake-Related Ground Failure in the New Madrid Seismic Zone and Their Implication for Seismic Hazard, April, 1997, University of Georgia, Athens.
- Wolf, L. W., The Mt. Ogden Swarms: A Case for Hydrologically Triggered Earthquakes? April, 1997, University of Georgia, Athens.
- Wolf, L. W., A Paleoseismic Study in the New Madrid Seismic Zone, July 1996, University of Alaska, Fairbanks.
- Wolf, L.W., The Colorado Plateau: Through Thick and Thin, February 1995, University of Tennessee, Knoxville.
- Wolf, L. W., The Colorado Plateau: Through Thick and Thin, March 1994, University of Alabama, Birmingham.

- Wolf, L. W., The Colorado Plateau: Through Thick and Thin, February 1994, Georgia Institute of Technology, Atlanta.
- Wolf, L. W. New Ideas from Old Data, Society of American Archivists, September 1992, Montreal, Canada.
- Wolf, L. W., The Colorado Plateau: Thick or Thin? January 1992, Carnegie Institution of Washington.
- Wolf, L. W., Deep Crustal Structure of the Colorado Plateau, October 1991, Cornell University.
- Wolf, L. W., Crustal Structure in Southcentral Alaska: Results from the TACT Experiment, April 1991, Institute of Geophysics, University of Texas, Austin.
- Wolf, L. W., Crustal Structure in Southern Alaska, April 1989, Alaska Geophysical Society, Anchorage.

Funded Projects

Pacific Northwest National Laboratory, Probabilistic Seismic Hazard Analysis Project, Hanford WA; 4/2012-8/2014

Tuttle & Assoc./NRC; Paleoliquefaction Studies in Moderate Seismicity Regions with a History of Large Events; 8/11-5/2015

USGS-National Earthquake Hazards Reduction Program; A gravity study of Holocene-active structures in the Puget Lowland, Washington; 1/2011-1/2013

NSF-Earthscope (Subcontract); USArray siting in Alabama; 5/10-8/10

USGS-National Earthquake Hazards Reduction Program; 3-D numerical modeling of coupled crustal deformation and pore fluid pressure interactions; 1/08-12/09

Auburn University Outreach; WET Alabama: Water EducaTion for Alabama; 6/08-12/09

NSF/Instrumentation and Facilities; Acquisition of electrical and electromagnetic instrumentation for hydrogeophysics; 4/06-4/08

AU Outreach; WET: Water Education for Alabama; 6/07-5/08

AU Concessions; An Active Earth Display; 7/07-6/08

Vulcan Materials; Geochemistry and bioremediation of mining-contaminated water in the Black Warrior Coal basin; 10/05-12/06

Au-Dean's Research Initiative; Exploratory study of effective bioremediation of AMD; 2/06-2/07

USGS-NEHRP; Pore fluid pressure variations from crustal deformation and regional groundwater flow; 2/05-2/07

AU-OVPR; Geophysical Signals from Microbial Activity; 6/03-8/04

AU Environmental Institute; Geophysical Assessment of Microbial Activity; 4/03-7/04

USGS/AWRRI; Development of geophysical assessment tools for a new groundwater remediation process; 3/01-2/02

USGS/NEHRP; Geophysical investigations of earthquake-induced liquefaction at cultural sites in the New Madrid seismic zone; 11/02-10/04

AU DRI; Analysis tools for shallow subsurface geophysical methods; 2/99-7/01

USGS/NEHRP; Geophysical investigations of earthquake-induced liquefaction in the New Madrid seismic zone; 11/97-4/00

American Chemical Association/Petroleum Research Fund; Crustal structure across the Bering Strait, Alaska; 6/95-8/99

NSF/DUE/ILI; An instrumented laboratory for environmental geophysics; 7/94-6/96

AU Grant-in-aid; Geochemical and geophysical characterization of high-iron groundwaters; 5/95-4/96 AU-Breeden Teaching Grant; Virtual field experiences for physical geology classes; 7/96-12/97

Service

1. University service (current):

Member, Efficiency Task Force committee (Oct 2011 – present)

Member, Honors College Advisory Committee (Sept 2011 – present)

Member, Research Week 2012, Executive Committee (Jan 2011 - present)

Chair, Undergraduate Research Forum Committee (Jan 2011- present)

Chair and co-Editor-in-Chief, Ad-hoc committee for AUJUS, AU Journal of Undergraduate Scholarship (Aug 2011-present)

Chair, Undergraduate Research Fellowship Selection committee (Aug 2011-present)

Chair, Committee for Selecting the Provost's Award for Excellence in Mentoring (Aug 2011-present)

Member, Assistant Provost and Honors College Director search committee (Feb 2012 - present)

Member, Sustainability Advisory Board (Jan 2012- present)

Member, STEM Education Task Force (June 2011-present)

2. College:

COSAM Dean Search Committee, Fall 2010- Aug 2011

COSAM Enrollment and Capacity Committee, Fall 2010-Jan 2011

COSAM On-Line Course Task Group, Fall 2010-Jan 2011

COSAM Student Travel Fund, Chair Fall 1999-June 2011

3. Department (current):

Curriculum Committee, 1994-present (chair 2000-2005; member 2005-present) Academic advisor for undergraduate majors

4. Professional service:

Board of Directors, Incorporated Research Institutions for Seismology, 1994-2004; Institutional Representative, 2004-present

Associate Editor, Bulletin of the Seismological Society of America, 2000-2010

Professional Memberships

Seismological Society of America
American Geophysical Union
Geological Society of America
Incorporated Institutions for Seismology
Environmental and Engineering Geophysics Society
Society of Exploration Geophysicists
Alabama Geological Society
Council on Undergraduate Research
American Association of Colleges and Universities

Graduate Students Supervised

<u>1. Degree completed (MP=major professor; CM=committee member; EM=external committee member-degree)</u>:

Jonathan Honeycutt (EM-MCE), Pascual Tabares (CM), Suraj Bajgain (MP), Gregory Dyer (MP), Deblina Bose (MP), David Graham (EM-MCE), Lee Beasley (CM), Chad Harrold (CM), Doyeon Lim (EM-M.Ed), Kevin Bogdan (CM), Kelli Hardesty (MP), Prakash Dhakal (CM), Gabriel Kassos (CM), Chadia Affane (EM-Ph.D. Math), Robert Monrreal (CM), James Griffin (CM), Stephanie Mager (CM), Daniel Morris (CM), Jennifer Hansom (CM), Stephanie Park (MP), Shawnewaz M. (CM), Sharon Browning (MP), Lijun Shi (EM-PhD CE), Pat Baird (CM), Jeremy McCartha (O-MCE), Jamie Webb (CM), Phil Valek (EM-Ph.D. Physics), Tasaneeya Kosuwan (CM), Dan Zeltner (CM), Brad Carter (CM), April Barnes (MP), Sanjoy

Chakrabudi (E-PhD CE), Jonathan Collier (MP), Daphne Williams(CM), Todd Grant (MP), Andre Klein (CM), Jochen Floesser (MP), Paul Schoenly (CM),

<u>2. Degree in Progress</u>: Justin Cox (MP) Ruhollah Keshvardoost (MP), James Taylor (MP), Christopher Marlow (CM), Richard Jannett (EM-PhD CE)