

DONALD J. STIERMAN

Associate Professor of Geophysics, Department of Environmental Sciences
The University of Toledo, Toledo, OHIO 43606

EDUCATION

Ph.D. (Geophysics), 1977, Stanford University (Dissertation: *A study of stress-induced velocity variations in situ*; Robert L. Kovach, principal advisor).

M.S. (Geophysics), 1974, Stanford University.

B.S. (Physics), 1969, State University of New York at Brockport.

PROFESSIONAL POSITIONS

1987 - present: Associate Professor of Geophysics, Department of Geology/Department of Environmental Sciences, The University of Toledo, Toledo, Ohio 43606.

1984 - 1987: Assistant Professor of Geophysics, Department of Geology, The University of Toledo.

1992 - 2009: Associate Director, Latin American Studies Institute, The University of Toledo, Toledo, Ohio 43606.

1977 - 1984: Assistant Professor of Geophysics/Assistant Research Geophysicist, Department of Earth Sciences/Institute of Geophysics and Planetary Physics, The University of California, Riverside, CA.

1972 - 1977: Graduate student, teaching and research assistant, Geophysics Department, Stanford University.

1969 - 1972: Peace Corps Volunteer; physics instructor, Escuela Superior del Profesorado "Francisco Morazán", Tegucigalpa, Honduras.

1985 - 1992: Geophysicist (part-time), U.S. Geological Survey, Menlo Park, National Center for Earthquake Research.

1982 - 1987: Associate, Geophysicist (part-time), Applied Geomechanics, Inc., Santa Cruz, CA 95062.

1980 - present: Consultant (part-time) to various clients, applied environmental and engineering geology and geophysics.

1974 - 1975: Geophysicist (part-time), U.S. Geological Survey, Menlo Park, CA, National Center for Earthquake Research.

HONORS & AWARDS

Fulbright research and teaching fellowship, Honduras, Autumn 2002.

TEACHING

Courses Taught During Semesters:

EEES 1010: Physical Geology
EEES 1050: Geological Hazards (Distance Learning)
Geol 2020: Water and Mineral Resources and the Environment (no longer offered)
Geol 2030: Environmental Geology & Resources Laboratory (no longer offered)
EEES 2100: Fundamentals of Geology
EEES 2500: Computer Applications in Environmental Sciences
EEES 2510: Advanced Computer Applications in Environmental Sciences
EEES 3310 Field Methods: Structural Geology and Mapping
EEES 4610/5610 Introduction to Geophysics (WAC)
EEES 4620/5620: Environmental & Engineering Geophysics
EEES 4630/5630: Numerical Methods in Geophysics
EEES 4640: Applied Geology
EEES 6100: Glacial Stratigraphy & Geophysics
EEES 6800/8800: Digital Field Mapping (no longer offered)
EEES 6908: Earth Technologies and Climate Change

Other Teaching Responsibilities:

EXCEL summer program for high school students, science and math enrichment (3 days)

Academic advising, **Latin American Studies** majors 1992 - 2009.

In addition to teaching equivalents to courses listed above under the academic quarter system, courses listed below were taught on the quarter calendar:

ALS 312 - The Geology of Earthquakes (Adult Liberal Studies Science Seminar)

Taught **Geology 121** as writing-intensive.

Taught Geographical Information Systems and assisted graduate students performing thesis work while on a Fulbright in Honduras (Universidad Pedagógica, Tegucigalpa) in 2002.

Occasional speaker on earthquakes or plate tectonics, 5th grade, junior high school and high school classrooms.

Individual work with students:

Senior honors thesis supervisor:

Daniel L. Bentley, 1993
Ibrahim Al-zadjali, 1996
Gregory Buchoveckey, 1999
Patricia Gallant, 2005
Panagiotis Bordovalos, 2014

Master of Science thesis supervisor, University of Toledo:

R. A. Stanley, 1987 (co-advised with Dr. Ruedisili).
B.G. Kragbe, 1989 (co-advised with Dr. Ruedisili).
J. M. Stangl, 1989 (co-advised with Dr. Ruedisili).
W. McGuinness, 1990 (co-advised with Dr. Ruedisili).
S. R. Forman, 1991 (co-advised with Dr. Dean).
R. M. Croydon, 1991 (co-advised with Dr. Dean).
M. A. Chenevey, 1992 (co-advised with Dr. Ruedisili).
P. J. Hoyng, 1992 (co-advised with Dr. Ruedisili).
W. L. Turley, 1992.
L. A. Drane, 1993 (co-advised with Dr. Ruedisili).
M. F. Zakrzewski, 1993.
G. J. Brennan, 1994 (co-advised with Dr. Ruedisili).
L. Rivera A., 1994.
J. S. Grabil, 1994 (co-advised with Dr. Dean).
M. C. Chaffee, 1995.
J. L. Liberfinger, 1995.
B. B. Trytten, 1995.
Scott Gurney, 1997
Jeff Elliott, 2001.
Jessica Brandenberry, 2007
Patricia Gallant, 2008
Michael Friedhoff, 2009
Biniam Estifanos, 2014

Development of Curricular Materials:

2005 Taught EEES 1050 (Geological Hazards) in distance learning format; ALS 3060 (Earthquakes) taught in DL format, 2005.
2005 New course developed: **Digital Field Mapping** (EEES 6800/8800)
2004 New course developed: **Central America** (interdisciplinary Honor's seminar).
2004 New course developed: **Glacial Stratigraphy & Geophysics** (EEES 6100).
2002 New course developed: **Fundamentals of Geology** (EEES 2100).

Converting (1999) lectures to PowerPoint format: Geology 1010, 2020 (now 1050), 4610 and Adult Liberal Studies class on *Earthquakes*.

Developing collection of topographic, geological and geophysical maps from Central America, some used in laboratories.

Member of **Environmental Studies Task Force** that developed curriculum for new interdepartmental undergraduate majors in *Environmental Sciences* and *Environmental Studies*. Led Geology Department revision of course offerings to better meet the needs of students enrolled in these programs.

Secretary of Executive Committee and Member, Arts & Science Council **Curriculum Committee** during semester conversion (1 quarter released time).

Supervisor, Seismograph station **UTO** as educational display, shut down in 2012.

Member of Advisory Board of SciMaTEC from 1989-1995.

Participant in mentoring high school students via e-mail experiment, 1995-1996.

Awarded \$2500 from Center for Teaching Excellence to purchase slide scanner so that transparencies showing geological features can be scanned to CD and downloaded to classrooms, integrating visual aids with lecture (1996)

Awarded \$27,900 (\$13,950 from National Science Foundation plus \$13,950 Presidential match) for "Positioning and Mapping Instruments for Environmental Science Majors." Proposal includes plans (curriculum) for new laboratory experiences for undergraduates (1996).

RESEARCH AND SCHOLARSHIP

Published Articles - Reviewed and Refereed

(2004) Stierman, Donald J., Geophysical Detection of Caves and Karstic Openings; in *Encyclopedia of Caves and Karst Sciences* (John Gunn, Ed.); Fitzroy Dearborn, London, pp. 377-380.

(2000) Brady, James E., Christopher Begley, John Fogarty, Donald J. Stierman, Barbara Luke and Ann Scott, Talgua Archaeological Project: A Preliminary Assessment; **Mexicon**, **22** (5), 111-118.

(1999) Stierman, Donald J. and James E. Brady, Electrical resistivity mapping of landscape modifications at the Talgua site, Olancho, Honduras; **Geoarchaeology**, **14** (6), 495-510.

(1991) Wang, Tsili, John A. Stodt, Donald J. Stierman and Larry C. Murdoch, Mapping hydraulic fractures using a borehole-to-surface electrical resistivity method; **GeosExploration**, **28**, 349-396.

(1988) Stierman, Donald J. and L.C. Ruedisili, Integrating geophysical and hydrogeological data: an efficient approach to remedial investigations of contaminated ground water; in **Special Technical Pub. 963, American Society for Testing & Materials**, 43-57.

(1985) Stierman, Donald J. and J.H. Healy, A study of the depth of weathering and its relationship to the mechanical properties of near-surface rocks in the Mojave Desert ; **Pure & Applied Geophysics**, **122**, 425- 439.

- (1985) Stierman, Donald J. and A.E. Williams, Hydrologic and geochemical properties of the San Andreas fault at the Stone Canyon well; **Pure and Applied Geophysics**, **122**, 403-424.
- (1984) Stierman, Donald J., Electrical methods of detecting contaminated ground water at the Stringfellow waste disposal site, Riverside County, California; **Environmental Geology**, **6**, 11-20.
- (1984) Stierman, Donald J., Geophysical and geological evidence for fracturing, water circulation and chemical alteration in granitic rocks adjacent to major strike-slip faults; **J. Geophysical Research**, **89**, 5849-5857.
- (1983) Keller, B., W.A. Prothero, Jr., A.M. Trehu and D.J. Stierman, Ray tracing model of the Santa Barbara, California, land-sea seismic refraction experiment; **Geophysical Research L.**, **10**, 933-936.
- (1981) Stierman, Donald J., Comment on Gold and Soter: **Science**, **212**, 1296-1297.
- (1981) Stierman, Donald J. and S.O. Zappe, Lateral P-velocity gradients near major strike-slip faults in California; **Science**, **213**, 207-209.
- (1980) Stierman, Donald J., Earthquake sounds and animal cues: some field observations: **Bull. Seismological Society America**, **70**, 639-643.
- (1980) Stierman, Donald J., T.C. Lee, S.O. Zappe and D. Seamount, The Homestead Valley earthquakes of March 15, 1979: A progress report on some aftershocks and field observations: **California Geology**, **32**, 14-17.
- (1979) Stierman, Donald J., J.H. Healy and R.L. Kovach, A stress-induced velocity gradient; an alternative to the Pg refractor in the Gabilan Range in central California; **Bull. Seismological Society America**, **69**, 397-415.
- (1979) Stierman, Donald J., E. Zubrow and L. Atkinson, Remains of prehistoric human in strata deformed by the San Andreas fault near Stone Canyon, San Benito County, California; **Tectonophysics**, **52**, 381-387.
- (1979) Stierman, Donald J. and R.L. Kovach, An in situ velocity study: the Stone Canyon well; **J. Geophysical Research**, **84**, 672-678.
- (1976) Stierman, Donald J. and W.L. Ellsworth, Aftershocks of the February 21, 1973 Point Mugu, California earthquake; **Bull. Seismological Society America**, **66**, 1931-1952.
- (1976) Boore, David M. and D.J. Stierman, Source parameters of the Point Mugu, California earthquake of 21 February, 1973; **Bull. Seismological Society America**, **66**, 385-404.
- (1973) Cooper, M.R., R.L. Kovach, C.H. Cramer and D.J. Stierman, Some aspects of strain release and seismic slip in central California; in **Proceedings Conf. on Tectonic Problems of**

the San Andreas Fault System (R.L. Kovach and A. Nur, eds.), **Stanford University Publications Geological Sciences Vol. XIII**, 64-69.

TECHNICAL OR OPEN-FILE REPORTS (Not refereed unless otherwise noted)

1990 Stierman, Donald J. and S. Biehler, **The Bouguer Gravity Map of Cajón Pass**; Subsurface Data Center Open-file Report 90-1, Geology Department, The University of Toledo, Toledo, Ohio 43660 (10 pp., 3 plates).

1990 Stierman, Donald J., testimony at Hazardous Waste Landfills Hearing before the Subcommittee on Transportation and Hazardous Materials of the Committee on Energy and Commerce, House of Representatives, August 9, 1989, Serial No.101-89, pp. 143-156.

1989 Stierman, Donald J., **Deep Drilling for Earthquake Research at Cajón Pass**; Jurupa Mountains Cultural Center Quarterly, Riverside, CA, Vol. 21, 23 pp.

1989 Armstrong, Baxter H. and Donald J. Stierman, **Acoustic emission from foreshocks and secular changes prior to earthquakes**; in Proceedings, Fourth Conference on Acoustic Emission/Microseismic Activity in Geological Structures and Materials; Trans Tech Publications, Clausthal- Zellerfeld, F.R. Germany, 309-326.

1986 Stierman, Donald J., L.C. Ruedisili and J. Stangl, **The application of surface geophysics to mapping hydrogeologic conditions in a glaciated area of northwest Ohio**; in Proceedings, Surface and Borehole Geophysical Methods and Ground Water Instrumentation National Water Well Association Conference and Exposition, October 15-17, Denver, CO, 581-600.

1986 Stierman, Donald J. and A.E. Williams, **Geophysical, geological and geochemical characterization of granitic rocks associated with the San Andreas fault**; (in) Summaries, National Earthquake Hazards Reduction Program, Technical Reports Vol. XXII; U.S.G.S. Open-file Report 86-383, 461-464.

1986 Stierman, Donald J., **Drilling logs and wireline geophysical logs of the Cajón Pass well, San Bernardino County, California**; U.S.G.S. Open-file Report 86-349, 167 pp.

1985 Simpson, Robert W., R.E. Bracken and D.J. Stierman, **Bouguer Gravity and Aeromagnetic Maps of the Sheep Hole- Cadiz Wilderness Study Area (CDCA-305), San Bernardino County, California**; U.S.G.S. Miscellaneous Field Studies Map MF-1615-B, 4 sheets, 1:48,000 (internally reviewed by U.S.G.S.).

1985 Stierman, Donald J. and A.E. Williams, **Geophysical, geological and geochemical characterization of granitic rocks associated with the San Andreas fault system**; (in) Summaries of Technical Reports, Vol. XIX, Open-file Report 85-22, 468-471.

1984 Cramer, Chris H., D.J. Stierman and T.C. Lee, **A detailed microearthquake survey of Long Valley, California, Known Geothermal Resource Area, July - September, 1981**;

California Dept. Conservation, Div. Mines and Geology Open-file Report 84-53 SAC, 240 pp., 14 plates (internally reviewed by CDMG).

Abstracts

2015 STIERMAN, Donald, B. Estifanos, P. Bordovalos and L Drane, GEOPHYSICAL SEARCH FOR CONCEALED KART NOTH OF BELLEVUE, OHIO; Geological Society of America Abstracts with Program, Vol. 47, No. 5, p. 18.

2015 Fisher, Timothy G., J. Blockland, B. Anderson, D. Krantz, D. STIERMAN and R. Goble, TESTING LAKE LEVEL FLUCTUATIONS IN ANCESTRAL LAKE ERIE, NORTHWEST OHIO; Geological Society of America Abstracts with Program, Vol. 47, No. 5, p. 5.

2015 Wilson, Daniel R., J. Horton, M. Cline, L. Groat, D. Krantz and D. STIERMAN, GEOPHYSICAL AND STRATIGRAPHIC INVESTIGATIONS OF THE FORMATION OF THE OTTAWA LAKE BASIN, MONROE COUNTY, MI, USA; Geological Society of America Abstracts with Program, Vol. 47, No. 5, p. 30.

2013 MAIKE, Christopher, FUGATE, Joseph M., KRANTZ, David E., STIERMAN, Donald, LIU, Xiuju, BROTHERS, Candice E., and SEARS, Lindsey, SUBSURFACE GEOPHYSICAL PROFILING OF THE OAK OPENINGS SAND RIDGE. Geological Society of America Abstracts with Program, Vol. 45, No. 4.

2013 ESTIFANOS, Biniam Haileab and STIERMAN, Donald J., GEOPHYSICAL PROSPECTING FOR CONCEALED KARST NEAR BELLEVUE, OH; Geological Society of America Abstracts with Program, Vol. 45, No. 4.

2012 Stierman, Donald J., B. Petruzzi and R. Murphy, Electrical Resistivity Investigations On and Around Landfills (Abstract); 2012 GSA Abstracts with Programs, Vol. 44, No. 5, p. 27.

2012 Estifanos, Biniam, K. Siemer, J. Blockland, K. Zmijweski, S. Ransford, T. Fisher, D. Krantz and D. Stierman, Evaluating the Genesis of “Maumee II” Shoreline near Wauseon, Ohio, USA (Abstract); 2012 GSA Abstracts with Programs, Vol. 44, No. 5, p. 28.

2011 BANASZAK, Joel F., ARDNER, Jacob, and STIERMAN, Donald J., PROGRESS REPORT ON GEOPHYSICAL INVESTIGATIONS OF A (PROBABLE) IMPACT CRATER CONCEALED BY GLACIAL SEDIMENTS, LIBERTY TOWNSHIP, SENECA COUNTY, OHIO; Geological Society of America, joint Eastern/North Central Section Annual Meeting.

2011 TRAUB, Janet, DARMON, Thomas, BACA, Kira J., BLOCKLAND, Joseph, BRISLAWN, Emily, FANG, Min, KRANTZ, David E., FISHER, Timothy G., and STIERMAN, Donald J., EVOLUTION OF THE GRAND MERE LAKES, SOUTHWESTERN MICHIGAN, INFERRED FROM GEOPHYSICAL SURVEYS AND CORING; Geological Society of America, joint Eastern/North Central Section Annual Meeting.

2010 Stierman, Donald J., Did rock colors play a role in selecting Copán’s location? in 2010

Abstracts with Programs, The Geological Society of America, Joint Meeting North-Central & South-Central, p. 91.

2010 Banaszak, Joel F., B. Anderson, J. Knapp, T. White, B. Hanes, D. Stierman, D. Krantz and T. Fisher, Using geophysical investigations to test the conceptual model of the evolution of the Grand Mere Lakes, southwestern Michigan. (Abstract) in 2010 Abstracts with Programs, The Geological Society of America, Joint Meeting North-Central & South-Central, p. 100.

2010 Hanes, Barbara, B. Anderson, J. Banazak, D. Krantz, D. Stierman and T. Fisher, Conceptual model for the formation of the Grand Mere Lakes region in Berrien County, southwestern Michigan. (Abstract) in 2010 Abstracts with Programs, The Geological Society of America, Joint Meeting North-Central & South-Central, p. 100.

2009 Stierman, Donald J. and D.E. Krantz, Geophysical Methods for Quaternary Research and Environmental Investigations in the Great Lakes Basin; Abstracts, 52nd Annual Conference, International Association for Great Lakes Research, Toledo, Ohio, p. 213.

2009 Bourland, D., Campbell, M., and Stierman, D.J., Using Ground Penetrating Radar to Locate Unmarked Graves in Toledo, Ohio, USA; Abstracts, 52nd Annual Conference, International Association for Great Lakes Research, Toledo, Ohio, p. 21.

2009 Stierman, Donald J., S.A. McCormick, J. Weber and M. Campbell, A Magnetometer Survey of an Old Psychiatric Hospital Cemetery, Toledo, Ohio; Abstracts with Program, North-Central Meeting of the Geological Society of America, Rockford, IL, p. 73.

2009 Campbell, Melinda, D. Bourland and D.J. Stierman, History, High School and Geophysics: Using Ground-Penetrating Radar to Locate Unmarked Graves in Toledo, Ohio, USA; Abstracts with Program, North-Central Meeting of the Geological Society of America, Rockford, IL, p. 67.

2008 Stierman, Donald J., Optimizing Magnetometer Data Quality And Coverage At Archaeological Sites; Abstracts With Program, North-Central Meeting Of The Geological Society Of America, Evansville, IN.

2007 Brandeberry, Jessica L. and Stierman, Donald J., A Passive Seismic Investigation Of The Crustal Stucture Under Ohio; Abstracts with Program, Annual Meeting of the Geological Society of America, Denver, CO.

2007 Castañeda, Mario, D. Krantz and D.J. Stierman, **Beach Erosion Along The Caribbean (North) Coast Of Honduras, Central America**; Geological Society of America Abstracts with Program, joint North Central/South Central meeting, April, 2007.

2007 Gallant, Patricia and D.J. Stierman, Linking **Geophysical Signatures To Sediment Properties In Lucas County, Ohio**; Geological Society of America Abstracts with Program, joint North Central/South Central meeting, April, 2007.

2007 Brandenberry, Jessica and D.J. Stierman, **A Passive Seismic Investigation Of The Crustal Structure Under Ohio**; Geological Society of America Abstracts with Program, joint North Central/South Central meeting, April, 2007.

2006 Brandenberry, J., P. Gallant and D. Stierman, **Geophysical Investigation Of Glacial Lake Shorelines In Lucas County, Ohio**; Abstract, Annual North-Central Sectional Meeting of the Geological Society of America.

2005 Stierman, Donald J., B. Mitchell, B. Skubon, D. Krantz, H. Jol and T. Fisher, Geophysical and GIS investigations of the Oak Openings sand ridge in NW Ohio; 39th Annual Meeting North-Central Section, Geological Society of America.

2005 Wilt, Amy S, D. Stierman and D. Dwyer, Geophysical mapping the top of bedrock at the King Road landfill, Lucas County, Ohio; 39th Annual Meeting North-Central Section, Geological Society of America.

2005 Gallant, Patricia and D. Stierman, Gravity investigation of the King Road landfill, Lucas County, Ohio; 39th Annual Meeting North-Central Section, Geological Society of America.

2004 Zimmer, Mindy, Patino, Lina, Asmerom, Yemane, Carr, Michael J., Polyak, Victor J., and **Stierman, Donald J.**, Multiple Mantle Melting Regimes In A Secondary Front Volcano, El Tigre, Central America; Annual meeting, Geological Society of America, Seattle.

2003 Stierman, Donald J., M.R. Castañeda and H. Arevalo, Analysis of destructive marejadas at the beachfront community of Cedeño, Gulf of Fonseca, Republic of Honduras; 2003 GSA Abstracts with Programs, Cordilleran Section Meeting, p. 29.

2003 Struffolino, Pamela and D.J. Stierman, Gravity interpretation of the Comayagua Valley, Honduras; 2003 GSA Abstracts with Programs, Cordilleran Section Meeting, p. 75.

2002 Wummel, Nichole and D.J. Stierman, Petrography of tuff from quarries associated with Copán; Geological Society of America Abstracts with Programs, Southeastern and North-Central Section Meeting, p. A-121.

2002 Struffolino, Pamela G and D.J. Stierman (2002), Inversion modeling of the complete Bouguer anomaly from the Honduras depression; Geological Society of America Abstracts with Programs, Southeastern and North-Central Section Meeting, p. A-5.

2001 Stierman, Donald J. and J. Elliott, Buried Impact Craters Revealed by Filtering Gravity Data; Abstracts with Programs, 35th Annual Meeting, North-Central Section, Geological Society of America, page A-13.

2000 Stierman, Donald J., Evidence for upturned rim rocks, Liberty Crater, Seneca County, Ohio; Abstracts with Programs, 34th Annual Meeting, North-Central Section, Geological Society of America, p. A-62.

1998 Buchoveckey, Gregory A. and D.J. Stierman, Bicycle magnetometer survey of the Seneca Anomaly, northern Ohio; Geological Society of America Abstracts with Programs, 1998 Annual Meeting, p. A-200.

1998 Friedhoff, Michael J. and D.J. Stierman, Geophysical techniques for site characterization, mapping karst and exploring archaeological sites; Geological Society of America Abstracts with Programs, 32nd Annual Meeting, North-Central Section, p. 18.

1998 Stierman, Donald J. and R.G. Phillips, Computer applications in geology: Hardware, software and instructional strategies of the Geology Department Student Cluster, University of Toledo; Geological Society of America Abstracts with Programs, 32nd Annual Meeting, North-Central Section, p. 73.

1997 Stierman, Donald J., Geophysical investigation of a suspected impact crater, Liberty Township, Seneca County, Ohio; **Abstracts with Programs**, National Meeting, Geological Society of America, p. A-215.

1997 Friedhoff, Michael J. and D.J. Stierman, Geophysical characterization of karst near Sheridan Cave, Wyandot County, Ohio; **Abstracts with Program**, National Meeting, Geological Society of America, p. A-146.

1996 Al-zadjali, Ibrahim and D. J. Stierman, Interpretation of Gravity from the Comayagua Graben, Honduras; **Abstracts with Programs**, Geological Society of America 30th Annual North-Central Section, p. 25.

1996 Stierman, Donald J., Geophysical Reconnaissance of Pre-columbian (?) Archaeological Sites in Eastern Honduras; **Abstracts with Programs**, Geological Society of America 30th Annual North-Central Section, p. 66.

1996 Rivera Aparicio, Leonidas and D.J. Stierman, Effects of Landuse and Geology in the Guacerique watershed, Francisco Morazán Province, Republic of Honduras; **Memorias**, Congreso Internacional de Geógrafos Latinoamericanistas, Tegucigalpa, Republic of Honduras.

1994 Chaffee, Maggi C., D.J. Stierman and R. Kocher, Geophysical prospecting for karst in northwest Ohio; 1994 **Abstracts with Programs**, North-Central Meeting, The Geological Society of America, p. 8.

1994 Trytten, Bradley and D.J. Stierman, Geophysical investigations of an impact(?) crater, Liberty Township, Seneca County, Ohio; 1994 **Abstracts with Programs**, North-Central Meeting, The Geological Society of America, p. 65.

1992 Stierman, Donald J., M. Chaffee, H. Ming, L. Jun, Z. Xuming and R. Kocher, Geophysical mapping of concealed glacial or pre-glacial geomorphology in northwest Ohio; 1992 **Abstracts with Programs**, National Meeting, The Geological Society of America, Cincinnati, OH.

1992 Stierman, Donald J., Geophysical techniques useful in ground water, landfill and Superfund site investigations; 1992 **Abstracts with Programs**, North-Central Section, The Geological Society of America, p. 66.

1992 Drane, Lawrence A., III, D.J. Stierman and L.C. Ruedisili, Geophysical investigation of the geologic (karst) controls on ground-water flow in Thompson Township, Seneca County, north-central Ohio; 1992 **Abstracts with Programs**, North-Central Section, The Geological Society of America, p. 12.

1991 Turley, William Lance and D.J. Stierman, Using selected geophysical methods for identifying solid waste landfill siting criteria at an Ohio site; 1991 **Abstracts with Programs**, North-Central Section, The Geological Society of America, p. 64.

1989 Stierman, Donald J., Gravity measurements in Cajón Pass; **EOS**, 70, 481.

1988 Stierman, Donald J., The pore pressure increase due to near-field P-waves: a model for temporary low-friction conditions during large earthquakes; **Seismological Res. L.**, 59, 19.

1988 Stierman, Donald J. and R.A. Marryott, Fluid flow during brecciation? Interpretation of some petrologic clues and two hydraulic mechanical models for the earthquake process; **EOS**, 69, 485.

1988 Wolberg-de Venecia, Kathryn, L.C. Ruedisili and D.J. Stierman, Processes controlling the migration of a chromium plume: an application of a finite - difference solute-transport model; **EOS**, 69, 371.

1986 Stierman, D.J., L.C. Ruedisili and J. Stangl, The application of surface geophysics to mapping hydrogeologic conditions of a glaciated area in northwest Ohio; (in) **Abstracts of Papers and Biographical Sketches of Presenting Authors**, National Water Well Conference on Surface and Borehole Geophysics, Denver, CO, Oct. 17, 1986.

1986 Stierman, D.J. and L.C. Ruedisili, Integrating geophysical and hydrological data: an efficient approach to remedial field investigations of contaminated ground water; presented at the **A.S.T.M. symposium on Field Methods for Groundwater Contamination Studies and Their Standardization**, Cocoa Beach, Florida, February 4, 1986.

1986 Stierman, D.J., Effective stress and the water table in fractured granitic rocks; **EOS**, 67, 373.

1985 Stierman, D.J., Natural earthquakes triggered by pore pressure; **Earthquake Notes**, 55, 19.

1984 Stierman, D.J., The relevance of measurements in deep boreholes to earthquake prediction research; **EOS**, 67, 1097.

1984 Marryott, R.A., A.E. Williams and D.J. Stierman, Petrologic and geochemical studies of granitic rocks of the San Andreas fault: Stone Canyon; **EOS**, 65, 1097.

- 1983 Stierman, D.J., Stone Canyon: A case history of borehole experimentation near the San Andreas fault; **EOS**, 64, 834.
- 1983 Stierman, D.J., Electrical detection of contaminated ground water at the Stringfellow Class 1 waste disposal site, Riverside County, California; **Fourteenth Biennial Conference on Groundwater**, Water Resources Center, Sacramento, CA, Sept. 19-20, 1983.
- 1983 Woolley, L.R. and D.J. Stierman, An interpretive aerial photography study of the Stringfellow Class 1 waste disposal site, Riverside County, California; **Fourteenth Biennial Conference on Groundwater**, Water Resources Center, Sacramento, CA, Sept. 19-20, 1983.
- 1983 Stierman, D.J., Geophysical and geochemical observations pertinent to fault zone evolution and the earthquake cycle; **Earthquake Notes**, 54, 65.
- 1982 Keller, D., W. Prothero, A. Trehu and D.J. Stierman, 1982 Santa Barbara, California, Land-Sea seismic refraction experiment; **EOS**, 63, 1037.
- 1982 Stierman, D.J., Fractures, fault zones, fluids and earthquakes: **AGU Chapman Conference on Fault Behavior and the Earthquake Generation Process**, Snowbird, Utah.
- 1982 Aronstam, P.S. and D.J. Stierman, Experiments in shear wave vertical profiling; Annual meeting, **Seismological Society of America**, Anaheim, CA.
- 1982 Stierman, D.J., Measurements of the physical properties of granitic rocks in situ: fractures and fault zones; (in) **Workshop on the Geophysical Characterization of Local Regions**, I.G.P.P. Director's Office, Report No. 1LLNL82, Livermore, CA, 42-43.
- 1981 Cramer, C.H., D.J. Stierman and T.C. Lee, Preliminary results from a detailed microearthquake survey of Long Valley KGRA using digital event recorders; **EOS**, 62, 969.
- 1981 Stierman, D.J., Electrical prospecting for contaminated ground water; **EOS**, 62, 862.
- 1980 Stierman, D.J., S.O. Zappe and P. Aronstam, Lateral P-wave velocity gradients near major strike-slip faults; **EOS**, 61, 1024-1025.
- 1979 Stierman, D.J., T.C. Lee, S.O. Zappe and D. Seamount, Preliminary results of the early portion of the Homestead Valley, California earthquake sequence of March 15-17, 1979; Annual meeting, **Seismological Society of America**, Golden, CO.
- 1977 Stierman, D.J., E. Zubrow and L. Atkinson, Remains of prehistoric human in strata deformed by the San Andreas fault near Stone Canyon, San Benito County, California; (in) **Abstracts of the 1977 International Symposium on Recent Crustal Movements**, Stanford University.
- 1977 Stierman, D.J., In situ response of seismic wave velocities to stress; **EOS**, 58, 433.

1976 Stierman, D.J., H. Ito and J.H. Healy, Relation of P-velocity in situ to laboratory measurements in tectonically active region; **EOS**, 57, 961.

1974 Stierman, D.J. and W.L. Ellsworth, Secondary faulting in the Point Mugu, California earthquake sequence: Annual meeting, **Seismological Society of America**, Las Vegas, NV.

GRANTS AND CONTRACTS DIRECTED AS PRINCIPAL INVESTIGATOR:

(\$ amounts indicate extramural funding share to Dr. Stierman's account.) Internal awards not listed unless competitively selected. Declined proposals are too numerous to list.

Positioning and Mapping Instruments for Environmental Science Majors (\$13,950 from National Science Foundation, matched by \$13,950 from President's Office), 1996.

Transportation and expenses (estimated value >\$4000) for 3 persons, 16 days, archaeological research (geophysical applications) in Catacamas, Honduras; financed by Mr. Larry August (documentary producer), June 12-28, 1996.

Seismic refraction/depth to bedrock study, Monroe County, Michigan (\$2,553), 1994.

Watershed protection study of the Rio Guacerique, Honduras (\$2,500 gift from private citizen), 1993.

Undergraduate research internship: Analysis of Gravity Data from Honduras (University of Toledo) 1993.

Methods of Verifying Sealing Integrity in Geotechnical Boreholes (\$46,794; S.A. Smith Consulting, subcontract to perform research for U.S. Department of Transportation), 1993.

Geophysical Investigations of a Proposed Solid-Waste Landfill Site in Ohio (\$5000; Milliron Industries), 1990.

Real-time electrical monitoring of shallow hydraulic fractures; University of Toledo Faculty Research Fellowship (FRAF), 1989.

Gravity investigation of Cajon Pass (\$12,000: sponsored by the NSF through DOSECC), 1987-1989.

Geophysical monitoring of shallow hydraulic fracturing (\$8,500: sponsored by the USEPA through the University of Cincinnati), 1988.

A numerical simulation of transient strain-induced pore-pressure increase and associated strength decrease on a fault surface as a mechanical model for the earthquake instability; U. of Toledo Faculty Research Fellowship (FRAF), June-August, 1985.

Geophysical, geological and geochemical characterization of granitic rocks associated with the San Andreas fault system (\$48,000: U.S.G.S. Earthquake Hazards Reduction Program), 1983-1984.

In situ studies of seismic wave velocities and attenuation in basement rocks in southern California (\$42,000: NSF), 1979-1984.

Characterization of in situ physical properties of rocks associated with active faults (SCAR: Statewide Critical Applied Research - measurements of the geophysical properties of rocks underlying a liquid chemical waste dump), 1980-1983.

Homestead Valley Earthquake Sequence (\$5,000: California Div. Mines & Geology), 1979.

Microearthquake studies in the Mammoth Lakes KGRA (\$9,000: joint project with California Div. Mines & Geology, sponsored by the D.O.E.), 1980-1982.

Seismic refraction and gravity study of the Dale Lake-Sheephole Mts. Area, California (\$9,500: sponsored by the U.S.G.S.), 1981-1982.

SERVICE

UNIVERSITY:

Associate Director for Latin American Programs and Latin American Studies Institute; responsibilities undefined (promote Latin American-related activities on campus and involvement of faculty and students in Latin American activities and projects; monthly meetings with Director of CISP and other Areas Directors; correspond with Latin American Studies directors at other universities; meet with Latin American dignitaries visiting campus when requested by Administration.).

Executive Board, UT-AAUP (2008 – present).

Member, Faculty Senate: 2006 - 2008.

OBOR Science Review Panel, Ohio Transfer Module (2008 – present)

COLLEGE

Elected to **College Committee on Academic Personnel:** 2003 - 2005 (served as Committee Chair 2004-2005)

"Outside" member, search committees for Physics & Astronomy and for Geography & Planning departments.

Departmental representative to **Natural Sciences & Mathematics Council**, 2013-2014; **Arts & Sciences Council:** 1991-1997, 2009-2010; member of Rules Committee 1992-1993, Elections Committee 1993-1994; **Curriculum Committee** 1994-1997, 2009-2010; Executive Board, 1996-1997.

DEPARTMENT

Library Representative since 1991; **Chair, Search Committee** for 2 new faculty members, 1993-1994; Chair of Departmental Curriculum Committee 1994-1998; Member of Departmental Personnel Committee 2001 - 2003, 2005 - present; Chair, Dept. Computer Committee 2008 - 2010; Chair, Dept. Assessment Committee 2008 - 2010; Department representative UT-AAUP, 1994 – present.

STATE AND LOCAL BOARDS

Member, State of Ohio Seismic Safety Council (since 1992); Member, Hoffman Road Chamber of Commerce Task Force, 1989-1993.

PRO BONO PROFESSIONAL CONSULTING

Have, on numerous occasions, provided professional opinions to Ohio Geological Survey, Ohio Department of Natural Resources (Ground Water Division), City of Toledo and other state, regional and local government representatives, in the areas of applied geophysics, environmental issues and seismic safety.

Investigated shoreline flooding, landslide hazard and sinkhole problem for COPECO (Honduras emergency response agency) while on Fulbright in 2002.

Site evaluation for sewage oxidation lagoon, Renacer Marcovia (Honduras), for CARE (2000).

Geological evaluation of the setting, El Gigante rock shelter, for Pennsylvania State Ph.D. candidate Tim Sheffler (2000).

Supplied maps and digital elevation models in support of **Engineers Without Borders** (Toledo College of Engineering) Honduras projects.

PRIVATE PROFESSIONAL CONSULTING

Professional geophysical services to local environmental consultants: seismic refraction, magnetometer, electromagnetic and electrical resistivity surveys for groundwater quality variations, locating buried wellheads and storage tanks, and characterizing seismic safety hazards: 1985 to present.

Environmental consultant to citizen organizations concerned with ground water or waste disposal issues: 1996.

Environmental consultant to City of Milan, Augusta Township and York Township, Michigan, regarding issue of permit to develop underground wastewater injection wells: 1994-1995.

Directed electrical exploration for polluted ground water and provided other professional services at the Stringfellow SUPERFUND site, southern California, 1984-1987.

CIVIC AND COMMUNITY SERVICE

Member of Hurricane Mitch Relief Mission from City of Toledo, March, 1999.

Volunteer coach, Gesu Elementary school CYO teams: Cross country, boy's basketball, soccer, track, 1985-1995.

Elected member, Gesu School Board and Gesu Community Council, 1986-1991.

Appointed member, Gesu Pastoral Council, 1998 - 2007.

PROFESSIONAL MEMBERSHIPS

MEMBERSHIP IN PROFESSIONAL SOCIETIES: Seismological Society of America (since 1973); Society of Exploration Geophysicists (since 1975); American Geophysical Union (since 1973); Geological Society of America (since 1975).

Congress of Latin Americanist Geographers (1996-1997).

Other

Recognized for Outstanding Service in Coaching by Diocese of Toledo's Catholic Youth Organization (1995).

Married - father of 4, grandfather of 10.

Last updated June 4, 2015