

DAVID E. KRANTZ

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EDUCATION:

Ph.D. Marine Science, University of South Carolina, 1988; dissertation: *Stable isotopes of oxygen and carbon in mollusk shell carbonate: Interpretive models and applications.*

M.S. Marine Science, University of South Carolina, 1983; thesis: *Environmental and growth information from stable isotope records in the sea scallop, Placopecten magellanicus.*

B.S. Biology, College of William and Mary, 1979

EXPERIENCE:

2004-present	Associate Professor, University of Toledo, Department of Environmental Sciences
2001-2004	Assistant Professor, University of Toledo, Department of Environmental Sciences
2001-2003	Adjunct Faculty Appointment, U.S. Geological Survey
1997-2001	Physical Scientist, U.S. Geological Survey, Water Resources Division, Dover, Delaware
1989-1997	Assistant Professor, University of Delaware, College of Marine Studies and Department of Geology (joint appointment)
1988	Hydrologic Technician, U.S. Geological Survey, Water Resources Division, Columbia, South Carolina
1986-1987	Research Assistant, University of South Carolina, Marine Science Program
1986 (Dec)	Visiting Professor, Federal University of Ouro Preto, Brazil,
1985 (Oct-Nov)	Sponsored by PETROBRAS
1983-1984	Instructor, University of South Carolina, Fort Jackson Campus
1981-1982	Teaching Assistant, University of South Carolina, Marine Science Program, Honors College
1979-1981	Laboratory Specialist, Virginia Institute of Marine Science

RESEARCH INTERESTS:

Geological oceanography of estuarine and shelf systems. Quaternary geology and sea-level history of the Atlantic Coastal Plain, estuaries, and continental shelf. Coastal processes, geomorphology, and stratigraphy. Coastal geology of Great Lakes and glacial lakes. Stable isotope geochemistry applied to paleoclimate and marine processes. Hydrogeology of the coastal plain, and interactions between groundwater and estuaries. Transport and fate of nutrients to coastal bays. Applied geophysics: borehole geophysical logging, high-resolution marine reflection seismics, ground-penetrating radar, side-scan sonar, and marine and on-land resistivity.

TEACHING AWARD:

2013, 2017 Nominated: Outstanding Teacher Award, University of Toledo
2007-09 Master Teacher, College of Arts & Sciences, University of Toledo

COURSES TAUGHT AT THE UNIVERSITY OF TOLEDO :

Physical Geology	EEES 1010
Geologic Hazards	EEES 1050
Oceanography and Water Resources	EEES 2400
Stratigraphy and Sedimentology (WAC course)	EEES 3200
Earth Materials II: Stratigraphy (WAC course)	EEES 3220
Quaternary Geology	EEES 4200/5200
Environmental & Engineering Geophysics	EEES 4620/5620
Senior Geology Seminar	EEES 4920
Glacial Stratigraphy and Geophysics	EEES 6100
Departmental Seminar	EEES 6930
Special Topics: Coastal Geology	EEES 6980

COURSES TAUGHT PREVIOUSLY (at the Universities of South Carolina and Delaware) :

100/200-level (introductory undergraduate courses)

Introduction to Marine Science 101 & 102 Concepts in Oceanography

600-level (introductory graduate courses)

Marine Geology	Paleoceanography
Paleoecology	Stable Isotope Geochemistry
Recent Sedimentary Environments (field course)	Atlantic Margin Stratigraphy (seminar)

800-level (advanced graduate courses)

Estuarine and Shelf Geological Oceanography Oceanography Seminar: Polar Oceans

ACADEMIC ADVISING:

Full Member of the University of Toledo Graduate Faculty

Principal Advisor

Towell, Amy R. Surficial geology of the Lyons, Ohio, quadrangle. M.S. Geology candidate, started Summer 2017.

Finnegan, John P. Geophysical investigations of the Ottawa Lake Basin, and relationship to the Arkona Shoreline of Ancestral Lake Erie. M.S. Geology candidate, started Fall 2016.

Dilworth, John R. 2017. Analysis and Chronology of Glacial Lake Arkona in the Western Lake Erie Basin, USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences, 218 p.

Wilson, Daniel R. 2016. An examination of hydrogeological research conducted on Assateague Island with respect to the freshwater lens geometry and geography. M.S. Geology (non-thesis), University of Toledo, Department of Environmental Sciences.

Darmon, Thomas W. 2015. Geophysical applications to measure or monitor the distribution of fresh, brackish, and saline groundwater beneath a barrier island. M.S. Geology (non-thesis), University of Toledo, Department of Environmental Sciences.

ACADEMIC ADVISING (cont.) :

- Maike, Christopher A. 2014. A flood-tidal delta complex, the Holocene/Pleistocene boundary, and seismic stratigraphy in the Quaternary section off the southern Assateague Island coast, Virginia, USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences, 84 p.
- Banaszak, Joel F. 2011. Hydrostratigraphic framework for the surficial aquifer in the Indian River Bay, Delaware, watershed. M.S. Thesis, University of Toledo, Department of Environmental Sciences, 208 p.
- Knapp, Jessica (2008-2011) M.S. candidate, University of Toledo, Department of Environmental Sciences. Topic: Stratigraphy and sediment processes of Maumee Bay, western Lake Erie. Withdrew for medical reasons.
- Seifert, Matt (2006-2007) M.S. candidate, University of Toledo, Department of Environmental Sciences. Topic: Mapping Assateague Island, Maryland. Switched to science education and earned a Master of Education from University of Toledo.
- Honeycutt, Maria G. 2003. Spatial variability in shoreline change along the Atlantic coast of Delaware: Influence of the geologic framework. Ph.D. Dissertation (Oceanography), University of Delaware, 197 p.
- Honeycutt, Maria G. 1997. Processes and geologic history of the southwestern margin of Delaware Bay. M.S. Thesis (Oceanography), University of Delaware, 112 p.
- Khim, Boo Keun 1996. Stable isotope chemistry of marine mollusks and paleoceanography of the Bering Strait region during the last interglaciation. Ph.D. Dissertation (Oceanography), University of Delaware, 167 p.
- Bock, Katherine W. 1993. A paleoenvironmental interpretation of the late Pleistocene of Gomez Pit, Virginia, using the stable isotopes of oxygen and carbon. M.S. Thesis (Oceanography), University of Delaware, 123 p.

Undergraduate Research Advisor

- Blice, Hannah 2016-17. Sustainable gardening and urban agriculture; landscaping with native plants; summer internship 2016 with Quintero Center supported by UT USRCAP.
- Vicari, Linnea 2015-17. Sustainable gardening and urban agriculture; summer internship 2016 with Quintero Center supported by UT USRCAP; summer internship 2017 with Toledo Grows supported by the Honors College.
- Cholette, Heather 2013. Overwash processes on Assateague Island, Maryland.
- Miller, Alice 2013. Glacial and post-glacial stratigraphy of Maumee Bay, Lucas County, Ohio.
- Sears, Lindsey 2012-13. Ground-penetrating radar stratigraphy of the Oak Openings Sand Ridge, Lucas County, Ohio.
- Norton, Abby 2005. Saline and hypersaline groundwater under Assateague Island, Maryland. Honors Thesis, University of Toledo Honors Program, and Department of EEES, 103 p.

Co-Advisor

- Norton, Abby N. 2008. Post-glacial stratigraphy and sand resources in the Western Basin of Lake Erie. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Co-advised with Alison Spongberg]

Co-Advisor (cont.)

- Hall, Sagit 2005. Hydrodynamics of freshwater ponds on a siliciclastic barrier island, Assateague Island National Seashore, Maryland. M.S. Thesis, University of Maryland MEES Program, 172 p. [Co-advised with Douglas Levin, University of Maryland Eastern Shore]
- Harris, M. Scott 2000. Influence of a complex geological framework on Quaternary coastal evolution: An example from Charleston, South Carolina. Ph.D. Dissertation (Geology), University of Delaware, 331 p. [Co-advised with John Wehmiller]
- Daly, Julia F. 1997. Ground-penetrating radar investigation of Holocene and Pleistocene spit complexes in southeastern Delaware. M.S. Thesis (Geology), University of Delaware, 161 p. [Co-advised with Susan McGeary]
- Murphy, Stephanie 1996. A seismic study of the youngest paleo-incised valley of the Delaware River. M.S. Thesis (Geology), University of Delaware, 110 p. [Co-advised with John Madsen]
- Sotsky, Jill M. 1995. Ground-penetrating radar imaging of Quaternary stratigraphy in Delaware. M.S. Thesis (Geology), University of Delaware, 131 p. [Co-advised with Susan McGeary]

Advisory Committee Member

- Luczak, Jonathan M.S. candidate, started 2016. Channel abandonment chronology of Ancestral Lake Erie's Imlay outlet, Lapeer County, Michigan. University of Toledo, Department of Environmental Sciences. [Tim Fisher primary advisor]
- Armstrong, Eric M.S. candidate, started 2016. Imaging bedrock surface using passive seismic interferometry. University of Toledo, Department of Environmental Sciences. [Don Stierman primary advisor]
- Groat, Lucas 2016. The physical hydrogeology of the broader historical Irwin Prairie wetland system. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Jamie Martin-Hayden primary advisor]
- Blockland, Joseph 2013. The Surficial Geology of Fulton County, Ohio: Insight into the Late Pleistocene-Early Holocene Glaciated Landscape of the Huron-Erie Lake Plain, Fulton County Ohio, USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Tim Fisher primary advisor]
- Baca, Kira 2013. Environmental impacts on the development and dune activity of Oxbow Lake along the southwest coast of Lake Michigan at Saugatuck, Michigan USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences, 150 p. [Tim Fisher primary advisor]
- Swan, Kathie 2012. Sorption characteristics of veterinary antibiotics monensin and lasalocid to soil clay constituents kaolinite, illite and montmorillonite. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Alison Spongberg primary advisor]
- Anderson, Brad G. 2011. Estimating the duration of ancestral Lake Erie using varve analysis at and above the Warren Stage in Northwest Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 113 p. [Tim Fisher primary advisor]
- Hanes, Barbara E. 2010. Paleo-storminess in the southern Lake Michigan basin as recorded by eolian sand downwind of dunes. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 176 p. [Tim Fisher primary advisor]

Advisory Committee Member (cont.)

- Bobak, Deanna M. 2010. Polycyclic aromatic hydrocarbon characterization in Otter Creek, Northwest Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 96 p. [Alison Spongberg primary advisor]
- Campbell, Melinda 2009. The evolution and chronology of the Lake Warren shoreline in the Oak Openings region of Ohio, USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 132 p. [Tim Fisher primary advisor]
- Castaneda, Mario 2009. The origin and dynamics of coastal processes at Sand Point, Pictured Rocks National Lakeshore, Michigan, USA. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 139 p. [Tim Fisher primary advisor]
- Fisher, James H. 2009. Use of hydrologic models at the King Road Landfill, Lucas County, Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [James Martin-Hayden primary advisor]
- Friedhoff, Michael J. 2009. Geophysical mapping of karst features at Sheriden Cave, Wyandot County, Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. 44 p. [Don Stierman primary advisor]
- Gallant, Patricia 2008. Geophysical characterization of surficial Quaternary sediments, Lucas County, Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Don Stierman primary advisor]
- Wikel, Geoffrey L. 2008. Variability in geologic framework and shoreline change: Assateague and Wallops Islands, Eastern Shore of Virginia. M.S. Thesis, Virginia Institute of Marine Science.
- Austin, Brittany F. 2007. Holocene paleoecology and climate change in Silver and Stony Lakes, Oceana County, Michigan, USA. M.S. Thesis, Department of Environmental Sciences, University of Toledo, 122 p. [Mark Camp and Tim Fisher co-advisors.]
- Brandeberry, Jessica 2007. A passive seismic investigation of the crustal structure under Ohio. M.S. Thesis, University of Toledo, Department of Environmental Sciences. [Don Stierman primary advisor.]
- Haponski, Amanda 2007. Molecular, morphological, and biogeographic resolution of cryptic taxa in the Greenside Darter *Etheostoma blennioides* complex. M.S. Thesis, University of Toledo, Department of Environmental Sciences. (thesis reader)
- Timmons, Emily 2007. Evolution of coastal dunes on the Lake Michigan shore near Holland, Michigan. Senior thesis, Department of Geological & Environmental Sciences, Hope College, Holland, Michigan.
- Mierzwiak, Sara 2006. Enhanced *in situ* bioremediation of a trichloroethylene hotspot using a dilute vegetable oil emulsion. M.S. Thesis, Department of EEES, University of Toledo, 89 p.
- Boudreau, Amber M. 2005. Constraining the Nipissing transgression in the central Lake Michigan Basin. M.S. Thesis, Department of EEES, University of Toledo, 119 p.
- Weyer, Kelly A. 2005. Eolian sand in lacustrine sediment: A proxy for water levels in the Lake Michigan Basin. M.S. thesis, Department of EEES, University of Toledo, 111 p.
- Mitchell, Brian 2005. Identification and mapping of Greenland Gap (Upper Devonian) units on the eastern limb of Sideling Hill syncline, Hampshire, Hardy, and Morgan Counties, West Virginia. M.S. thesis, Department of EEES, University of Toledo, 101 pages, 21 plates.

Advisory Committee Member (cont.)

Served on 11 thesis and dissertation committees at the University of Delaware, 1992-2002

PROPOSALS SUBMITTED: (University of Toledo)

- 2017 *Mapping the surficial geology of the Lyons, Ohio, 7.5-Minute Quadrangle – A glacial to glacial-lacustrine transition.* US Geol. Survey EDMAP Program, \$17,500. PI David Krantz
- 2015 *Developing a New General Education Course, Environmental Geology.* University Teaching Center, Office of the Provost, University of Toledo. Co-PIs David Krantz and Alison Spongberg. (funded)
- 2010-2011 *Hydrologic Assessment of the Potential Effects of Sea-Level Rise on Natural Resources, Assateague Island National Seashore.* U.S. Geological Survey, through the Cooperative Ecosystem Studies Unit, Great Lakes-Northern Forests CESU. \$17,500. (funded)
- 2010-2012 *Long-term monitoring of the effects of accelerated sea-level rise and climate change on Assateague Island National Seashore.* \$85,000. PI: Carl Zimmerman, National Park Service. (funded, but internal to the NPS)
- 2009-2012 *Collaborative research: Quantifying geologic and temporal controls on water and chemical exchange between groundwater and surface water in coastal estuarine systems.* Submitted to the National Science Foundation. PI: Holly Michael, University of Delaware. Co-PIs: John Bratton, David Krantz, Lenny Konikow, Scott Andres. \$525,000. (funded; UT portion \$80,500)
- 2007-2009 *Shallow stratigraphic framework and sediment budget for the nearshore shelf, La Ceiba, Honduras.* Submitted to USAID Honduras (not funded).
- 2007-2008 *Synthesis of geomorphologic and hydrogeomorphic data for resource management maps.* Submitted to the National Park Service, Natural Resource Preservation Program. PI: David Krantz. \$25,000 (not funded).
- 2007-2008 *Function of a mitigation wetland at Maumee Bay State Park, Lucas County, Ohio.* Cooperative with U.S. Department of Agriculture, Ohio Department of Natural Resources, and City of Oregon, Ohio. \$511,000 (funded).
- 2006-2008 *Evaluating sand resources in the Western Lake Erie Basin.* Submitted to the Lake Erie Protection Fund. Co-PIs: Alison Spongberg and David Krantz. \$10,000 (not funded).
- 2006-2008 *Digital geomorphologic and hydrogeomorphic maps for Assateague National Seashore, Maryland and Virginia.* National Park Service, Cooperative Ecosystem Studies Unit (CESU). PI: David Krantz. \$78,330 (funded).
- 2005-2007 *Towards a Chincoteague Inlet management plan: Considering the influence of geologic framework on coastal change and hazards.* Proposal to the Virginia Coastal Resources Management Program, Co-PIs: Geoffrey Wikel, Carl Hobbs (Virginia Institute of Marine Science), and David Krantz. \$80,860, with subcontract to UT, (not funded).
- 2006-2008 *Science-Based Restoration of Oak-Openings in an Urban-Agricultural Landscape: an Initiative for a Consortium for Oak-Openings Research & Education (CORE).* Proposal to the U.S. Department of Agriculture, and the Cooperative Ecosystem Studies Unit (CESU) of the National Park Service, PI: Jiquan Chen, with 12 Co-PIs from University of Toledo and Bowling Green State University. \$1,506,000 (not funded).

PROPOSALS SUBMITTED: (cont.)

- 2005-2007 *Quantifying submarine ground-water discharge to a section of the Delaware River Estuary*. Pre-proposal to Delaware Sea Grant. PI: David Krantz, Co-PIs: Matthew Schwartz, John Madsen. \$103,800 (not funded).
- 2005-2008 *Geomorphology, soils, and ground water as the foundation for the vegetation community on Assateague Island*. National Park Service. PI: David Krantz, Co-PI: Glenn Guntenspergen (U.S. Geological Survey). \$301,000 (not funded).
- 2005-2007 *New Initiatives in Coastal Wetlands Research and Restoration in Western Lake Erie*. Pre-proposal to the U.S. Department of Agriculture, PI: Hans Gottgens, Co-PIs: Alison Spongberg, David Krantz, Daryl Dwyer. \$1.5M (not funded).
- 2004-2006 *Phytoremediation plant research III: Otter Creek restoration, Lucas County, Ohio*. Proposal to the U.S. Department of Agriculture, PI: Daryl Dwyer, Co-PIs: Alison Spongberg, David Krantz, Von Sigler. \$532,000 (funded).
- 2003-2005 *Phytoremediation plant research II: King Road Landfill site, Lucas County, Ohio*. Proposal to the U.S. Department of Agriculture, PI: Daryl Dwyer, Co-PIs: Alison Spongberg, David Krantz, Von Sigler. \$595,000 (funded).
- 2003 *The effect of Pleistocene shorelines on modern shoreline retreat rates, Delaware and Maryland Atlantic coast*. University of Toledo Undergraduate Summer Research and Creative Activity Program, \$2,750 (submitted by Abby Norton, with David Krantz as faculty advisor) (funded).
- 2003 *Workshop to strengthen academic instruction and research in phytoremediation and studies in the Lake Erie Basin*, University of Toledo Program for Academic Excellence, \$8,500 (not funded).
- 2003-2004 *Hydrogeology of freshwater ponds on Assateague Island, Maryland*. Co-PIs: Douglas Levin (University of Maryland, Eastern Shore) and David Krantz. National Park Service Cooperative Ecosystem Studies Unit (CESU) Program. \$28,000 (funded).
- 2003-2005 *Decision support system for the Auglaize River basin*. Proposal to National Science Foundation, Water Cycle Research Program, PI: Czajkowski, K. (Krantz as a co-investigator). \$784,000 (not funded).
- 2002-2003 *Hydrogeology of Delmarva coastal bays: Stratigraphy, ground-water flow, and nutrient transport*. University of Toledo Summer Research Awards and Fellowship Program, \$10,000 (not funded).
- 2002-2003 *Quaternary geologic history and surficial geology of the Snow Hill, Maryland, 1:24,000 quadrangle*. PI: David Krantz. U.S. Geological Survey, EDMAP Component of the National Cooperative Geologic Mapping Program. \$10,000 (funded).

RESEARCH SUPPORT:

- 2015 Developing a New General Education Course, Environmental Geology. University Teaching Center, Office of the Provost, University of Toledo. Co-PIs David Krantz and Alison Spongberg. (funded)
- 2010-2011 Hydrologic Assessment of the Potential Effects of Sea-Level Rise on Natural Resources, Assateague Island National Seashore. U.S. Geological Survey, through the Cooperative Ecosystem Studies Unit, Great Lakes-Northern Forests CESU. \$17,500. (Funded)

RESEARCH SUPPORT (cont.) :

- 2009-2012 *Collaborative research: Quantifying geologic and temporal controls on water and chemical exchange between groundwater and surface water in coastal estuarine systems.* Submitted to the National Science Foundation. PI: Holly Michael, University of Delaware. Co-PIs: John Bratton, David Krantz, Lenny Konikow, Scott Andres. \$525,000. (Funded; UT portion \$80,500)
- 2007-2008 *Function of a mitigation wetland at Maumee Bay State Park, Lucas County, Ohio.* Cooperative with U.S. Department of Agriculture, Ohio Department of Natural Resources, and City of Oregon, Ohio. Co-PIs: D. Dwyer, D. Krantz, T. Fisher, K. Egan, and A. Spongberg \$511,000.
- 2006-2007 *Research vessel support for a seismic survey of the Western Basin of Lake Erie.* Co-PIs: Alison Spongberg and David Krantz. Ohio Sea Grant, Stone Laboratory, \$5000.
- 2006 *Survey of shoreface sand ridges off Ocean City, Maryland.* Cooperative project with Maryland Geological Survey, PI: Bob Conkwright, project supported by U.S. Minerals Management Service.
- 2006-2008 *Digital geomorphic and hydrogeomorphic maps for Assateague Island National Seashore, Maryland and Virginia.* PI: David Krantz. National Park Service, Great Lakes Northern Forest Cooperative Ecosystem Studies Unit (CESU). \$78,330.
- 2006 *Marine resistivity equipment for undergraduate research and courses.* PI: David Krantz, \$48,000, Ohio Board of Regents, Program for Undergraduate Instructional Equipment.
- 2004-2006 *Phytoremediation plant research III: Otter Creek restoration, Lucas County, Ohio.* U.S. Department of Agriculture, PI: Daryl Dwyer, Co-PIs: Alison Spongberg, David Krantz, Von Sigler. \$532,000.
- 2003-2004 *Phytoremediation plant research II: King Road Landfill site, Lucas County, Ohio.* Co-PIs: Daryl Dwyer, David Krantz, Alison Spongberg, Von Sigler (University of Toledo). U.S. Department of Agriculture. \$595,000.
- 2002-2003 *Submarine ground-water discharge to the Delmarva coastal bays.* Project Chief: John Bratton (U.S. Geological Survey); Co-Investigator: David Krantz. U.S. Geological Survey, Coastal and Marine Geology Program. \$214,000.
- 2002-2003 *Hydrogeology of Delmarva coastal bays.* Project Chief: David Krantz. U.S. Geological Survey, Office of Ground Water. \$15,000.
- 2003-2004 *Hydrogeology of freshwater ponds on Assateague Island, Maryland.* Co-PIs: Douglas Levin (University of Maryland, Eastern Shore) and David Krantz. National Park Service Cooperative Ecosystem Studies Unit (CESU) Program. \$28,000.
- 2003-2004 *Survey of ground-water discharge to Chincoteague Bay, Maryland and Virginia.* PI: Dan Phelan (U.S. Geological Survey); Co-Investigator: David Krantz. National Park Service Assateague Island National Seashore. \$49,400.
- 2002-2003 *Quaternary geologic history and surficial geology of the Snow Hill, Maryland, 1:24,000 quadrangle.* PI: David Krantz. U.S. Geological Survey, EDMAP Component of the National Cooperative Geologic Mapping Program. \$10,000 (renewable for a second year).

RESEARCH SUPPORT (cont.) :

- 2002-2003 *Influence of geologic framework on shoreline retreat rates, Assateague Island National Seashore, Maryland and Virginia*. Co-PIs: David Krantz and Douglas Levin (University of Maryland, Eastern Shore). National Park Service Cooperative Ecosystem Studies Unit (CESU) Program. \$99,600.
- 2001-2002 *Age and nutrient content of ground water discharging to Indian River Bay*. Co-PIs: David Krantz and JK Böhlke (U.S. Geological Survey). Delaware Department of Natural Resources and Environmental Control. \$40,000.
- 2001-2002 *Quaternary and late Tertiary geologic history of the central Delmarva Peninsula* [mapping project]. Project Chief: Wayne Newell (U.S. Geological Survey); Co-Investigator: David Krantz. U.S. Geological Survey, Cooperative Geologic Mapping Program.
- 2001 *Pathways of ground-water flow to Indian River Bay, Delaware*. The Center for the Inland Bays. \$10,000. [To supplement the coastal bays hydrogeology project].
- 2000-2002 *Hydrogeology of Delmarva coastal bays: Integration of technologies*. Project Chief: David Krantz. U.S. Geological Survey, Office of Ground Water. \$140,000.
- 2000-2001 *Hydrogeologic framework of the surficial aquifer, Southeast Atlantic Coastal Plain [South Carolina and Georgia]*. Project Chief: David Krantz. U.S. Geological Survey, National Water-Quality Assessment Program. \$37,000.
- 2000 *Marine resistivity survey in Rehoboth and Indian River Bays, Delaware*. Co-PIs: John Madsen, David Krantz, and Frank Manheim. Delaware Sea Grant. \$6,000.
- 1999-2000 *Hydrogeologic framework of the surficial aquifer, Mid-Atlantic Coastal Plain*. Project Chief: Judy Denver (U.S. Geological Survey); Co-Investigators: Scott Ator and David Krantz. USGS National Water-Quality Assessment Program. \$380,000.
- 1999-2000 *Geological framework of the Delmarva coastal bays*. Project Chief: Frank Manheim (U.S. Geological Survey); Co-Investigators: David Krantz and John Bratton. U.S. Geological Survey, Coastal and Marine Geology Program. \$150,000.
- 1999 *Patuxent River Basin nonpoint source study*. Project Chief: David Krantz. Maryland Department of the Environment. \$45,000.
- 1999 *Geophysical studies of the Delaware Inland Bays*. Center for the Inland Bays. \$10,000. [Support for my participation in the CISNet project listed below].
- 1998-2001 *CISNet: Nutrient inputs as a stressor and net nutrient flux as an indicator of stress response in Delaware's Inland Bays ecosystem*. PI: William Ullman, College of Marine Studies, University of Delaware. U.S. Environmental Protection Agency. \$618,000.
- 1997-2000 *Geohydrologic foundations for ecosystem restoration: Modeling of baseflow loadings of nutrients in Mid-Atlantic Coastal Plain watersheds*. PI: Mohamed Hantush, U.S. Environmental Protection Agency. USGS Project Chief: Joseph Bachman (1997), David Krantz (1998-2000). Initial grant to USGS, \$396,000, supplemental grant, \$140,000.
- 1995-1996 *Marine climates of the U.S. Alaskan Coastal Plain during the late Neogene and Quaternary interglacials*. PI: David Krantz. NSF Polar Earth Sciences Program. \$42,366.
- 1994-1999 *Geochemical integrity, geochronology, and paleoclimatology of late Pleistocene molluscan specimens, U.S. Middle and Southeastern Atlantic Coastal Plain*. Co-PIs: John Wehmiller and David Krantz. NSF Geology and Paleontology. \$249,000.

RESEARCH SUPPORT (cont.) :

1993-1996 *Stable isotope stratigraphy and paleoceanography of the Bering Strait region during the last interglacial.* PI: David Krantz. Petroleum Research Fund. \$50,000.

1993 *Equipment matching grant for purchase of used mass spectrometer.* PI: David Krantz. University of Delaware, Office of the Vice Provost for Research. \$150,000.

1991 *Study of the late Neogene development of the Delaware continental shelf.* Co-PIs: J.A. Madsen, D.E. Krantz, J.F. Wehmiller, S. McGeary, and F. Hall. UNOLS/University of Delaware Ship Advisory Council. Four days of ship time on the RV *Cape Henlopen*.

1991-1993 *Pleistocene interglacial marine climates, U.S. Middle Atlantic and southeastern Coastal Plains.* PI: David Krantz. NSF Geology and Paleontology. \$65,000.

1986-1987 *Stable isotope records of Neogene paleoclimate, U.S. Atlantic Coast.* NSF Paleontology and Stratigraphy. \$58,000 (Support for dissertation research; grant to D.F. Williams).

OTHER RESEARCH ACTIVITIES:

Participation in eighteen research cruises

Extensive geological field work on the Atlantic Coastal Plain, southern New Jersey to Georgia

Geological field work on the western coast of Michigan and in the Lake Erie basin

Field work (selected)

Fall 2014 – Geophysical and stratigraphic surveys Ottawa Lake basin, Monroe County, SE Michigan

Fall 2012 – Geological and geophysical site evaluation Irwin Prairie, Lucas County, Ohio

Summer 2012 – Geological and geophysical survey of Indian River Bay, Delaware

Fall 2011 – Geological and geophysical site evaluation Winameg Ridge, Fulton County, Ohio

Summer 2011 – Geological and geophysical survey of Indian River Bay, Delaware

Summer 2011 – Drilling, well installation, and geophysical survey, Assateague Island, Maryland

Fall 2010 – Geological and geophysical site evaluation Grand Mere State Park, Michigan

Summer 2010 – Geological and geophysical survey of Indian River Bay, Delaware

Fall 2009 – Geological and geophysical site evaluation Grand Mere State Park, Michigan

Summer 2008 – Geological and geophysical site evaluation Maumee Bay State Park

Summer 2008 – Geological and geophysical survey of Munising Bay, Lake Superior, Michigan

Fall 2007 – Geological and geophysical site evaluation Maumee Bay State Park

May 2007 – Seismic survey in Western Basin of Lake Erie

October 2006 – Seismic survey in Western Basin of Lake Erie

August 2006 – Ground-penetrating radar survey, dune field adjacent to Lake Michigan

June-July 2006 – Seismic survey of shoreface ridges off Ocean City, Maryland

June-July 2006 – Surface geophysics and mapping on Assateague Island, Maryland

Sep-Oct 2005 – Surface geophysics and coring, Blue Creek Metropark, Lucas Co., Ohio

Field work (cont.)

May 2005 – Seismic survey off southern Assateague Island, Virginia

October 2004 – Surface geophysics on Assateague Island for ground-water and pond studies

September 2004 – Geophysical surveys in western Michigan lakes and the Oak Openings region of northwest Ohio, with Glacial Stratigraphy and Geophysics course

June-July 2004 – Seismic surveys – Assateague Island Atlantic shoreface, southern section and Chincoteague Bay, southern section

May 2004 – Seismic surveys in western Michigan lakes – Silver, Stony, Hamlin

March-April 2004 – coring at the King Road Landfill site

October 2003, March and June 2004, October 2004 – Surface geophysics on Assateague Island in support of ground-water and pond studies, including M.S. and Honors thesis research by Sagit Hall and Abby Norton

July-August 2003 – Co-Project Chief for two-week drilling operation for ground-water study in Chincoteague Bay, Maryland.

June-July 2002 – Project Chief for five weeks of geophysical surveys, Atlantic Ocean off Assateague Island and Ocean City, Maryland, and in Chincoteague Bay, Maryland.

PUBLICATIONS:

Krantz, D.E., Hobbs, C.H., III, and Wikel, G.L. 2016. Chapter 12. Atlantic Coast and Inner Shelf. In: Bailey, C.M. et al., eds., *The Geology of Virginia*. Charlottesville, Va., Virginia Museum of Natural History Special Publication 18, p. 341-380.

Full citation for the book:

The Geology of Virginia (2016). Bailey, C.M. Sherwood, W.C., Eaton, L.S., and Powars, D.S eds. Virginia Museum of Natural History Special Publication 18, 537 p.

Fisher, T.G., Blockland, J.D., Anderson, B., **Krantz, D.E.,** Stierman, D.J., and Goble, R. 2015. Testing lake-level fluctuations in ancestral Lake Erie, northwest Ohio. *Ohio Journal of Science*, 115: 61-77.

Fisher, T.G., **Krantz, D.E.,** Castaneda, M.R., et al. 2014. Coastal geology and recent origins for Sand Point, Lake Superior, in Fisher, T.G., and Hansen, E.C., eds., *Coastline and Dune Evolution along the Great Lakes*, Special Paper 508: Boulder, Geological Society of America, p. 85–110.

Russoniello, C.J., Fernandez, C., Bratton, J.F., Banaszak, J.F., **Krantz, D.E.,** Andres, A.S., Konikow, L.F., Michael, H.A. 2012. Geologic effects on groundwater salinity and discharge into an estuary. *Journal of Hydrology*, 498: 1-12.

Fisher, T.G., Weyer, K.A., Boudreau, A.M., Martin-Hayden, J.M., and **Krantz, D.E.** 2012. Constraining Holocene-aged lake levels in the Lake Michigan basin. In: M. Lewis and J. King (eds.), *Paleo-Lake Levels in the Michigan Basin: 9500 BP to Present*. *Journal of Paleolimnology*, 47: 373-390.

Krantz, D.E. 2010. A Hydrogeomorphic Map of Assateague Island National Seashore, Maryland and Virginia, *National Park Service Natural Resources Report*, NPS/NRPC/GRD/NRR—2010/215, 63 pp.

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- Krantz**, D.E., Schupp, C.A., Spaur, C.C., Thomas, J.E., and Wells, D.V. 2009. Chapter 11. Dynamic systems at the land-sea interface. In: Dennison, W.C., Thomas, J.E. et al. (eds.), *Shifting Sands: Environmental and Cultural Change in Maryland's Coastal Bays*. University of Maryland, Center for Environmental Studies, p. 194-230.
- Bratton, J.F., Böhlke, J.K., **Krantz**, D.E. and Tobias, C.R. 2009. Flow of groundwater beneath a back-barrier lagoon: Geometry and geochemistry of the subterranean estuary at Chincoteague Bay, Maryland, USA. *Marine Chemistry*, 113: 78-92.
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- Krantz**, D.E. 2005. Geologic setting of the Mid-Atlantic Coastal Plain. In: Ator, S.W., Denver, J.M., Krantz, D.E., Newell, W.L., and Martucci, S.K. A surficial hydrogeologic framework for the Mid-Atlantic Coastal Plain. *U.S. Geological Survey Professional Paper* 1680, 38-44.
- Harris, M.S., Gayes, P.T., Kindinger, J.L., Flocks, J.G., **Krantz**, D.E., and Donovan, P. 2005. Quaternary geomorphology and modern coastal development in response to an inherent geologic framework: An example from Charleston, South Carolina. *Journal of Coastal Research*, 21: 49-64.
- Bratton, J.F., Böhlke, J.K., Manheim, F.T., and **Krantz**, D.E. 2004. Geochemistry of pore fluids and discharge of submarine ground water in Delmarva Peninsula coastal bays. *Ground Water*, Oceans Issue, 42: 1021-1034.
- Krantz**, D.E., Manheim, F.T., Bratton, J.F., and Phelan, D.J. 2004. Hydrogeologic setting and ground-water flow beneath a section of Indian River Bay, Delaware. *Ground Water*, 42: 1035-1051.
- Manheim, F.T., **Krantz**, D.E., and Bratton, J.F. 2004. Investigations of submarine ground-water discharge in Delmarva coastal bays by horizontal resistivity surveying and ancillary techniques. *Ground Water*, 42: 1052-1068.
- Wehmler, J.F., Simmons, K.R., Cheng, H., Edwards, R.L., Martin-McNaughton, J. York, L.L., **Krantz**, D.E., and Shen, C.-C. 2004. Uranium-series coral ages from the US Atlantic Coastal Plain – the “80 ka problem” revisited. *Quaternary International*, 120: 3-14.
- Honeycutt, M.G. and **Krantz**, D.E. 2003. Influence of the geologic framework on spatial variability in long-term shoreline change, Cape Henlopen to Rehoboth Beach, Delaware. *Journal of Coastal Research*, Special Issue 38: 147-167.
- Böhlke, J.K. and **Krantz**, D.E. 2003. Environmental tracers and isotopes in offshore ground water beneath Indian River estuary, Delaware. *U.S. Geological Survey Water-Resources Investigations Report* 03-4192, 37 p. <http://water.usgs.gov/pubs/wri/wri034192/>
- Khim, B.K., **Krantz**, D.E., Cooper, L.W., and Grebmeier, J. M. 2003. Seasonal discharge of estuarine freshwater to the western Chukchi Sea shelf identified in stable isotope profiles of mollusk shells. *Journal of Geophysical Research (Oceans)*, 108 (C9): 3301-3310.
- Daly, J., McGeary, S., and **Krantz**, D.E. 2002. Ground-penetrating radar investigation of a late Holocene spit complex: Cape Henlopen, Delaware. *Journal of Coastal Research*, 18: 274-286.

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- Bachman, L.J. **Krantz**, D.E., and Böhlke, J.K. 2002. Hydrogeologic framework, ground-water geochemistry, and assessment of nitrogen yield from base flow in two agricultural watersheds, Kent County, Maryland. *U.S. Environmental Protection Agency Report* EPA/600/R-02/008, 93 p. http://www.epa.gov/ada/download/reports/epa_600_r02_008.pdf
- Krantz**, D.E. and Powars, D.S. 2000. Hydrogeologic setting and potential for denitrification of ground water, Coastal Plain of Southern Maryland. *U.S. Geological Survey Water-Resources Investigations Report* 00-4051, 19 p.
- Bachman, L.J. and **Krantz**, D.E. 2000. The potential for denitrification of ground-water by Coastal Plain sediments in the Patuxent River Basin, Maryland. *U.S. Geological Survey Fact Sheet* FS-053-00, 4 p.
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- Evans, J.C., Ehrlich, R., **Krantz**, D.E., and Full, W. 1992. A comparison between polytopic vector analysis and empirical orthogonal function analysis for analyzing quasi-geostrophic potential vorticity. *Journal of Geophysical Research (Oceans)*, 97 (C2): 2,365-2,378.
- Krantz**, D.E. 1991. A chronology of Pliocene sea-level fluctuations: The U.S. Middle Atlantic Coastal Plain record. *Quaternary Science Reviews*, 10: 163-174.
- Krantz**, D.E. 1990. Mollusk-isotope records of Plio-Pleistocene marine paleoclimate, U.S. Middle Atlantic Coastal Plain. *Palaios*, 5: 317-335.
- Martin, R.E., Johnson, G.W., Neff, E.D., and **Krantz**, D.E. 1990. Quaternary planktonic foraminiferal assemblages of the northeast Gulf of Mexico, Colombia Basin (Caribbean Sea), and tropical Atlantic: Graphic correlation of faunal and oxygen isotope datums. *Paleoceanography*, 5: 531-555.
- Krantz**, D.E., Jones, D.S., and Williams, D.F. 1989. Reply to "Aspects of growth deceleration in bivalves: clues to understanding the seasonal $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ record." *Palaeogeography, Palaeoclimatology, Palaeoecology*, 70: 403-407.
- Krantz**, D.E., Kronick, A.T., and Williams, D.F. 1988. A model for interpreting continental-shelf hydrographic processes from the stable isotope and cadmium:calcium profiles of scallop shells. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 64: 123-140.

PUBLICATIONS (cont.):

- Krantz**, D.E., Williams, D.F., and Jones, D.S. 1987. Ecological and paleoenvironmental information using stable isotope profiles from living and fossil molluscs. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 58: 249-266.
- Romanek, C.S., Jones, D.S., Williams, D.F., **Krantz**, D.E., and Radtke, R. 1987. Shell growth of the small giant clam, *Tridacna maxima*, revealed by microstructural and stable isotopic variations. *Marine Biology*, 94: 385-393.
- Krantz**, D.E., Jones, D.S., and Williams, D.F. 1984. Growth rates of the sea scallop, *Placopecten magellanicus*, determined from the ¹⁸O/¹⁶O record in shell calcite. *Biological Bulletin*, 167: 186-199.
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TECHNICAL REPORTS:

- Krantz**, D.E. and Levin, D.R. 2005. Assateague Island Geologic Investigation – Atlantic Shoreface, Virginia Section. Digital Atlas, report to the National Park Service, Assateague National Seashore. 28 plates.
- Ullman, W.J., Wong, K.-C., Madsen, J.M. Scudlark, J.R. **Krantz**, D.E. Andres, A.S. McKenna, T.E. CISNet: Nutrient Inputs as a Stressor and Net Nutrient Flux as an Indicator of Stress Response in Delaware's Inland Bays Ecosystem (EPA Grant Number: R826945). Final Technical Report submitted to the U.S. Environmental Protection Agency, July 2003.
- Belval, D.L., Bradfield, A.D., **Krantz**, D.E., and Patterson, G.G. 1991. Benthic invertebrates in Lake Marion and selected tributaries in the vicinity of a hazardous-waste landfill near Pinewood, South Carolina, 1988. *U.S. Geological Survey, Water-Resources Investigations Report* 91-4140, 52 p.
- Burt, R.A., McMahon, P.B., Belval, D.L., **Krantz**, D.E., Robertson, J.F., and Nagle, D.D. 1989. Streamflow, lake-flow patterns, rainfall, and quality of water and sediment in the vicinity of a hazardous-waste landfill near Pinewood, South Carolina, March 1987 through early January 1989. *U.S. Geological Survey, Open-File Report*.
- Krantz**, D.E. 1989. Salinity estimates from the stable oxygen and carbon isotopic composition of *Crassostrea virginica* shell carbonate. In: Ward, L.G., Kearney, M.S., and Stevenson, J.C. Assessment of Marsh Stability at the Estuarine Sanctuary Site at Monie Bay, Implications for Management. *Maryland Department of Natural Resources, Report of Investigations*.

PUBLICATIONS IN PROCEEDINGS VOLUMES:

- Timmons, E., **Krantz**, D.E., and Hansen, E. 2007. Geomorphic history of a coastal dune complex along the southeastern shore of Lake Michigan. Proceedings of the International Coastal Symposium, Gold Coast, Queensland, Australia, April 16-20.
- Honeycutt, M.G. and **Krantz**, D.E. 2004. Influence of antecedent geology on spatial variability in shoreline change, Bethany Beach, Delaware. Proceedings of the International Conference on Coastal Sediments 2003, American Society of Civil Engineers. CD-ROM Published by World Scientific Publishing Corp. and East Meets West Productions, Corpus Christi, Texas, 14 p.

- Manheim, F.T., **Krantz**, D.E., Snyder, D.S., and Sturgis, B. 2002. Streamer resistivity surveys in Delmarva coastal bays. Environmental and Engineering Geophysical Society: Proceedings, Symposium for the Application of Geophysics to Engineering and Environmental Problems (SAGEEP 2002), Las Vegas, Nevada, February 10-14, 2002, Paper 13GSL5, 17 p.
- Honeycutt, M.G., **Krantz**, D.E. and Crowell, M. 2002. Role of nearshore geology and rate-calculation methods in assessing coastal erosion hazards. Proceedings of *Solutions to Coastal Disasters '02*, Ewing, L. and L. Wallendorf (eds.), American Society of Civil Engineers, Reston, Virginia, p. 582-595.
- Ullman, W.J., Wong, K.C., Madsen, J.A., Scudlark, J.R., Krantz, D.E., Andres, A.S., and McKenna, T.E. 2001. Nutrient transport and cycling in an agriculturally impacted coastal watershed: Multidisciplinary approaches to interdisciplinary environmental problems. Proceedings, Environmental Engineering Research Event, Noosa, Queensland, Australia, 20-23 November 2001, 10 p.
- McGeary, S., Daly, J.F., and **Krantz**, D.E. 1998. High-resolution imaging of Quaternary coastal stratigraphy using ground-penetrating radar. Proceedings of the 7th International Conference on Ground Penetrating Radar. (Extended abstract, 5 pages.)
- Martin, R.E., Johnson, G.W., Neff, E.D., and **Krantz**, D.E. 1990. Biostratigraphic expression of sequence boundaries in the Pleistocene: The Ericson and Wollin zonation revisited. *GCSSEPM Foundation 11th Annual Research Conference, Proceedings*: 229-236.

PUBLISHED ABSTRACTS: (98 total, selected recent abstracts listed)

- Krantz**, D.E. and Dilworth, J.R. 2018. Geomorphic comparison of the Lake Whittlesey and Lake Arkona paleo-shorelines in the Lake Erie Basin. Geological Society of America, North-Central Annual Section Meeting, Paper No. 25-7.
- Dilworth, J.R., **Krantz**, D.E., Fisher, T.G., and Stierman, D. 2018. Analysis and chronology of Glacial Lake Arkona in the western Lake Erie basin, USA. Geological Society of America, North-Central Annual Section Meeting, Paper No. 25-6.
- Finnegan, J.P. and **Krantz**, D.E. 2018. Geophysical analysis of Ottawa Lake and relationship to glacial lake Arkona, Monroe County, Michigan. Geological Society of America, North-Central Annual Section Meeting, Paper No. 35-4.
- Towell, A., Valachovics, T.R., Dehm, D., Samsen, B., Breitner, S., Fisher, T.G., **Krantz**, D.E., and Stierman, D. 2018. Geophysical investigation of a spit complex in Glacial Lake Maumee. Geological Society of America, North-Central Annual Section Meeting, Paper No. 34-2.
- Finnegan, J.P., Luczak, J., Armstrong, E., Gentner, T., **Krantz**, D.E., Fisher, T.G., and Stierman, D.J. 2017. Analysis of Erosional Features in the Northwest Corner of the Ottawa Lake Basin, Monroe County, Michigan. Geological Society of America, Northeastern and North-Central Annual Section Meeting, Paper No. 58-1.
- Finnegan, J.P., Gentner, T., Armstrong, E., Luczak, J., **Krantz**, D.E., Fisher, T.G., and Stierman, D.J. 2017. Geophysical Investigation of Magee Marsh, Lucas County, Ohio: Evidence of a Prograding Barrier Spit. Geological Society of America, Northeastern and North-Central Annual Section Meeting, Paper No. 58-4.

PUBLISHED ABSTRACTS (cont.):

- Dilworth, J.R., **Krantz**, D.E., Fisher, T.G., and Lepper, K. 2017. Analysis and Chronology of Glacial Lake Arkona in the Western Lake Erie Basin, USA. Geological Society of America, Northeastern and North-Central Annual Section Meeting, Paper No. 58-2.
- Dziekian, M.R., Fisher, T.F., **Krantz**, D.E., and Stierman, D.J. 2016. Stratigraphy of a Rimmed Ridge Plateau, Sturgis Moraine, Northeastern Indiana. Geological Society of America North-Central Section Meeting, Paper No. 27-10.
- Dilworth, J.R. 2016. Geophysical analysis of Glacial Lake Arkona barrier islands southeast of Napoleon, OH. Geological Society of America North-Central Section Meeting, Paper No. 27-6. [my Masters student]
- Krantz**, D.E., Wilson, D.R., and Dilworth, J.R. 2015. The River Raisin Floodway as a source of sand to the Lake Warren shoreline. Geological Society of America North-Central Section, Annual Meeting, Paper No. 4.
- Fisher, T.G., Blockland, J., Anderson, B., **Krantz**, D.E., Stierman, D.J., and Goble, R.J. 2015. Testing lake-level fluctuations in Ancestral Lake Erie, northwest Ohio. Geological Society of America North-Central Section, Annual Meeting, Paper No. 3.
- Wilson, D.R., Horton, J., Cline, M., Groat, L.R., **Krantz**, D.E., and Stierman, D.J. 2015. Geophysical and stratigraphic investigation of the formation of the Ottawa Lake basin, Monroe County, MI, USA. Geological Society of America North-Central Section, Annual Meeting, Paper No. 18-8 (poster).
- Maike, C.A., Banaszak, J.F., and **Krantz**, D.E. 2013. Modes of Overwash and Depositional Patterns on Assateague Island. American Geophysical Union, Fall Meeting, San Francisco, CA, Dec. 9-13, 2013.
- Maike, C., Fugate, J.M., **Krantz**, D.E., Stierman, D.J., Liu, X., Brothers, C.E., and Sears, L. 2013. Subsurface geophysical profiling of the Oak Openings Sand Ridge. Geological Society of America, North-Central Section, Annual Meeting, Paper No. 18-2 (poster).
- Krantz**, D.E., Madsen, J., and Childers, D. 2012. Importance of geologic setting in the development of offshore wind projects along the East Coast of the United States. AWEA Offshore Windpower Conference, Baltimore, MD, October 11-13. (poster)
- Estifanos, B.H., Siemer, K.W., Blockland, J., Zmijweski, K., Ransford, S., Fisher, T.G., **Krantz**, D.E., and Stierman, D.J. 2012. Evaluating the genesis of "Maumee II" shoreline near Wauseon, Ohio, USA. Geological Society of America, North-Central Section, Annual Meeting, Paper No. 16-11 (poster).
- Bratton, J.F., K.D. Kroeger, S.A. Ruberg, H.A. Michael, D.E. **Krantz** 2012. Comparison of methods and results in recent studies of direct groundwater discharge to the Atlantic coast and Great Lakes. Goldschmidt Conference, Montreal, Canada, June 24-29.
- Michael, H.A., C.J. Russoniello, C. Fernandez, L.F. Konikow, A.S. Andres, J.F. Bratton, J.F. Banaszak, D.E. **Krantz** 2012. Geologic effects on subsurface salinity distributions, groundwater flowpaths, and aquifer-estuary exchange in Indian River Bay, Delaware, USA. 22nd Salt Water Intrusion Meeting, Buzios, Brazil, June 17-22.

PUBLISHED ABSTRACTS (cont.):

- Russoniello, C.J., C. Fernandez, J.F. Bratton, D.E. **Krantz**, J. Banaszak, A.S. Andres, L.F. Konikow, H.A. Michael 2011. Control of submarine groundwater discharge patterns and salinity by a low-permeability paleochannel cap at Indian River Bay, Delaware, American Geophysical Union Fall Meeting, San Francisco, CA, December 4-9.
- Michael, H.A., C. Fernandez, C.J. Russoniello, A.S. Andres, K.D. Kroeger, D.E. **Krantz**, J.F. Banaszak, A. Musetto, K. Myers, L.F. Konikow, J.F. Bratton 2011. Geologic and Hydrologic Control of Porewater Chemistry and Submarine Groundwater Discharge into Indian River Bay, Delaware. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- Traub, J., Darmon, T., Baca, K.J., Blockland, J., Brislawn, E., Fang, M., **Krantz**, D.E., Fisher, T.G., and Stierman, D.J. 2011. Evolution of the Grand Mere lakes, southwestern Michigan, inferred from geophysical surveys and coring. Geological Society of America, Northeastern and North-Central Joint Meeting, Mar. 20-22. Paper No. 46-8.
- Banaszak, J.F. and **Krantz**, D.E. 2010. Incised valley fill and highstand deposits in the Indian River watershed, Delaware. Geological Society of America, Annual Meeting, Oct. 31-Nov. 3, 2010, Paper No. 100-7.
- Krantz**, D.E. 2010. The hydrogeomorphology of Assateague Island: Landforms, hydrology, and vegetation. Abstract No. 54-2. Geological Society of America Northeastern Section and Southeastern Section Joint Meeting, 13-16 March 2010, Baltimore, MD.
- Banaszak, J.F. and **Krantz**, D.E. 2010. Observations of overwash on Assateague Island following the November 2009 northeaster. Abstract No. 25-5. Geological Society of America Northeastern Section and Southeastern Section Joint Meeting, 13-16 March 2010, Baltimore, MD.
- Seminack, C.T., Buynevich, I.V., McBride, R.A., and **Krantz**, D.E. 2010. Historical analysis of a multiple inlet system, southern Assateague Island, Maryland: Implications for barrier-backbarrier interaction. Abstract No. 48-11. Geological Society of America Northeastern Section and Southeastern Section Joint Meeting, 13-16 March 2010, Baltimore, MD.
- Hanes, B.E., Anderson, B.G., Banaszak, J.F., **Krantz**, D.E., Stierman, D.J., and Fisher, T.G. 2010. Conceptual model for the formation of the Grand Mere Lakes region in Berrien County, southwestern Michigan. Abstract No. 42-5. Geological Society of America North-Central Section and South-Central Section Joint Meeting, 11-13 April 2010, Branson, MO.

SEMINARS:

- Eleven seminars at the University of Delaware
Twenty-eight invited seminars at other institutions

Recent seminars

- Presentation at Grand Valley State University for Earth Science Week, October 2016
Public lecture, Lake Erie Center, November 2013
Public Forum on the Japan Earthquake & Tsunami, March 2011
Departmental Seminar, University of Toledo, January 2010
Maryland Coastal Bays Program, June 2009
Bowling Green State University, January 2006
Oberlin College, Oberlin, Oh., March 2004

SERVICE TO THE UNIVERSITY OF TOLEDO:

2008-2018 General summary of service activities (not all committees and workshops are listed)

Chair, Department Undergraduate Assessment Committee
Member, Department Undergraduate Affairs Committee

Member, College of NSM Council
Member, College of NSM Council, Executive Committee
Member, College of NSM Council, Curriculum Committee
Member, College of NSM Committee on Diversity & Retention

Member, University Faculty Senate
Member, University WAC Committee
Member, Graduate Faculty

Member, Faculty Senate, Committee on Committees
Member, Faculty Senate, Core Curriculum Committee

Member, University Academic Program Review Committee
Member, Strategic Planning, Subcommittee on Student Success
Member, Committee to review draft documents for Strategic Planning
Served on numerous ad hoc committees with the Office of the Provost and Faculty Senate

2008 College of A&S Committee on Writing Across the Curriculum (WAC)
2008 Presentation for College of A&S Teaching, Engagement, Advising
2007 Represented Department at University of Toledo Undergraduate Majors Fair
2006-08 Ohio Board of Regents, Transfer Assurance Guides, Subcommittee for Natural Sciences
2006-08 College of Arts & Sciences Council
2006-08 Department Personnel Committee
2006-07 Committee to revise Geology undergraduate curriculum
2005-06 Committee to revise Geology graduate curriculum
2003-04 Co-chairman, EEES Departmental Seminar Series

SERVICE TO THE UNIVERSITY OF TOLEDO:

2003-04 Committee to develop a joint PhD program with Bowling Green State University
2003 Contributed to the OBOR equipment proposal (funded)
2003 Graduate-student recruiting letter to regional colleges and universities
2003 Seminar committee
2002 Contributed to the OBOR equipment proposal (funded)
2001 Faculty search committee
2001 Seminar committee

SERVICE TO PROFESSIONAL ORGANIZATIONS:

Manuscript Reviews

American Chemical Society, AGU Quadrennial National Report, *Geochimica et Cosmochimica Acta*, *Geo-Marine Letters*, *Journal of Coastal Research*, *Journal of Experimental Marine Biology and Ecology*, *Journal of Great Lakes Research*, *Marine Chemistry*, *Nature*, *Palaios*, *Paleoceanography*, *Quaternary Research*, *Sedimentary Geology*, *South Carolina Geology*, *Transactions of the American Fisheries Society*, *Tulane Studies in Geology and Paleontology*, *Veliger*, chapters for four books, US Geological Survey reports, and US Environmental Protection Agency reports.

Proposal Reviews

AAAS: WISC Program

NASA: Earth Science and Applications Division; Earth Systems Science Fellowship

NSF: Geology and Paleontology; Marine Geology & Geophysics; Polar Programs; Instrumentation & Facilities

NOAA: Climate and Global Change Program; Maryland Sea Grant Program; Delaware Sea Grant Program

Petroleum Research Fund (American Chemical Society)

U.S. Environmental Protection Agency

University of Delaware, College of Agricultural Sciences, Competitive Grants Program

Research Review Panels

US Environmental Protection Agency, 2005, *Science to Achieve Results (STAR) Program*

US Environmental Protection Agency, 2004, *Site Review: Alabama Center for Estuarine Studies*, Dauphin Island Sea Laboratory

US Environmental Protection Agency, 2001, *Ecological Indicators for Gulf of Mexico Estuaries*

US Environmental Protection Agency, 2000, *Environmental Indicators of Estuarine Condition*

[Panel of 30 specialists from various disciplines evaluated proposals for four grants of \$6 million each to develop an integrated, hierarchical set of indicators of estuarine “health” and condition.]

NSF, EAR Small Business Innovative Research, 1990

OTHER SERVICE AND PROFESSIONAL ACTIVITIES:

2009 Participant, NAGT Workshop, Strengthening Geoscience Programs, Williamsburg, VA
June 2009

2008 Presenter, Shallow Coastal Stratigraphy Workshop, Coastal Carolina University,
Conway, SC, July 9-10, 2008

2006-08 Member, Project Management Team for Maumee Bay State Park wetland and shoreline
restoration projects, sponsored by Ohio Department of Natural Resources and Toledo
Metropolitan Area Council of Governments (TMACOG)

2006-08 Ohio Board of Regents, Transfer Assurance Guidelines for Geology

2007 External reviewer for Promotion and Tenure, Anthony Foyle, Penn State Erie, The
Behrend College, School of Science

2007 External reviewer for Promotion and Tenure, Reed Schwimmer, Rider University, New
Jersey, Department of Geological, Environmental and Marine Sciences

OTHER SERVICE AND PROFESSIONAL ACTIVITIES: (cont.)

- 2006 Participant and presenter, *On the Cutting Edge – Professional Development for Geoscience Faculty: Teaching Sedimentary Geology in the 21st Century*, workshop sponsored by the National Science Foundation and the National Association of Geoscience Teachers, Salt Lake City, Utah, July 14-19. Exercise that I created is posted on the workshop website:
<http://serc.carleton.edu/NAGTWorkshops/sedimentary/index.html>
- 2005 Scoping meeting for geologic assessment of Assateague Island National Seashore, for the NPS Geologic Resources Evaluation Program, July 27
- 2002 Presentation: U.S. Geological Survey Sea-Level Rise Workshop, Woods Hole, Mass., September 24-25
- 2002 Convener: Workshop on USGS Research in the Coastal Bays (Delaware and Maryland), Annapolis, Maryland; for State and Federal agencies.
- 2000 Panelist: Public forum on drinking-water supply, Ocean View, Delaware
- 1999-2000 Program Development Work Group, MD-DE District, U.S. Geological Survey
- 1999 Graduate course in Geographic Information Systems (GIS)
- 1998 U.S. Geological Survey training course, *Ground-water/surface-water interactions*
- 1997 Graduate course in Hydrogeology
- 1996-2001 Member, Scientific and Technical Advisory Committee, Center for the Inland Bays (National Estuary Program), Lewes, Delaware.
- 1993 Co-convener, SEPM Symposium, *Episodic Sea-Level Changes in the Quaternary: Evidence from the Southeastern U.S.*
- 1993-94 Co-editor, special symposium issue *Journal of Coastal Research* (for above symposium)
- 1988 Participant in U.S. Geological Survey workshop, *Land-Surface / Atmosphere Interactions, with Emphasis on Evapotranspiration*
- 1988 Participant in U.S. Geological Survey and National Oceanic and Atmospheric Administration workshop, *Geological Indicators of Climate from Marine Environments*

SERVICE TO THE COMMUNITY:

- 2007-14 Ocean basins exercise, Timberstone Junior High School, Sylvania, Ohio
- 2006 Developed a map-based exercise on the ocean basins for middle school; presented the exercise to 8th grade classes at Timberstone Junior High, Sylvania, OH
- 2005 Presentations about the oceans to 5th grade Gifted & Talented program, Toledo, Ohio
- 2004 Presentations about the oceans to 2nd grade at St. Clement's Elementary, Toledo, Ohio
- 2003 Presentations about the oceans to 2nd grade at Stranahan Elementary, Sylvania, Ohio
- 2001-2009 Coach, Sylvania United Soccer
- 2001-2003 Coach, Sylvania Youth Soccer Association
- 1998-2000 Director, Milton Youth Soccer Program
- 1996-2000 Coach, Milton Youth Soccer Program
- 1996-2000 Coach, Milton Little League Baseball