#### **JOSEPH DANIEL ORTIZ**

Professor, Department of Geology, Kent State University

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## **Education**

Ph.D., Oceanography, 1995. (Advisor: Dr. Alan C. Mix)

Oregon State University, Corvallis OR, Major: Marine Geology.

Thesis: Planktic Foraminifers of the California Current at 42°N: Last Glacial Maximum and

Present.

B.S., with Honors, 1988. (Advisor: Dr. Warren Prell)

Brown University, Providence RI, Major: Aquatic Biology.

Honors thesis: An Ecological Model of Stable Isotope Variation and Size Distribution in

Northern Indian Ocean Populations of G. bulloides

# **Current Employment**

Professor with Tenure, Department of Geology, Kent State University, Sept., 2011-

## **Prior Employment**

- Associate Professor with Tenure, Department of Geology, Kent State University, Sept. 2005-2011.
- Assistant Director, Water Resources Research Institute, Kent State University, Sept. 2006-2008.
- Assistant Professor, Department of Geology, Kent State University, Aug. 2001-2005.
- Adjunct Associate Research Scientist, Lamont-Doherty Earth Observatory (L-DEO), Columbia University, Aug. 2001-2003.
- Associate Research Scientist, Lamont-Doherty Earth Observatory (L-DEO), Columbia University, July 1998-2001.
- Adjunct Assistant Professor, Division of Natural Sciences, St. Thomas Aquinas College, Sparkill, NY, Spring 2001 (Concurrent with L-DEO)
- Adjunct Assistant Professor, Department of Environmental Science, Barnard College, New York, New York, Fall 2000-2001 (Concurrent with L-DEO)
- Visiting Assistant Professor (part time), Department of Earth and Environmental Sciences, Wesleyan University, Middletown CT, Spring 1999-2000 (Concurrent with L-DEO)
- Post-doctoral Research Scientist, L-DEO, Columbia University, Advisor: Dr. W. Broecker, Feb. 1996 - June 1998.
- Post-doctoral Research Assistant, College of Oceanic and Atmospheric Sciences (COAS), Oregon State University (OSU), Advisor: Dr. A.C. Mix, May-Dec. 1995.

## Research and Education Grants (Total funds raised: \$7,768,440 from 1990 to present)

## Awards at KSU (\$6,810,632 from 2001 to present)

National Institutes for Water Resources-OH Water Resources Center, (6004013),
 Policy Tools for Reducing Nutrient Loads and Combating Harmful Algal Blooms
 (HABS) in Lake Erie: An Inventory and Assessment (Key personnel), \$24,455, 2015

## Awards at KSU (continued)

- Ohio Space Grant Consortium, Ohio Space Grant Consortium FY2014-2015 Junior/Senior Scholarships, \$24,250, 2014-
- Ohio Space Grant Consortium, Ohio Space Grant Consortium Fellowship, \$30,000, 2014-
- National Aeronautics and Space Administration (NNC15VB05P), Ground Data Acquisition and Processing for Hyperspectral Imaging of Harmful Algal Blooms (HABs), \$89,000, 2014-
- Ohio Board of Regents Water Quality Grant: HAB Detection, Mapping, and Warning Network: Sandusky Bay, G.S. Bullerjahn, R. M. McKay, J.D. Ortiz, D. Bade, J. Chaffin; Kent State Sub-award to J. Ortiz and D. Bade: \$128,349, 2014.
- Ohio Sea Grant 2014 Special Small Grant Award (R/ES-021-PD): Development of an expanded pigment spectral library for identification of phytoplankton by visible derivative spectroscopy, J. Ortiz, S. Parab (KSU), \$12,000, 2014.
- Kent State University Student Multicultural Center Scholars program, The Honor Project Trust, Cy Pres Initiative Tier II Grant, O. Ramos, J. Ortiz, and Y. Delgado, \$45,000, 2014.
- KSU University Research Council award: Field Studies of Microcystis, a harmful algal bloom causing algae in Grand Lake St. Marys, J. Ortiz, \$3,500; 2014.
- Ohio Sea Grant 2014 Small Grant Request (R/ER-105-PD): HPLC-measured Pigment and Growth Response of the Harmful Algal Species Microcystis (Cyanophyceae) to Variable Environmental Conditions, S. Parab (KSU), J. Ortiz, K. Ali (College of Charleston), \$10,000, 2014.
- NSF DUE TUES Grant: Bridging the Conceptual Divide Between Theoretical and Applied Environmental Chemistry, A. Jefferson, L. Griffith, J. Ortiz, D. Dees, \$199,819, 2012.
- Ohio Sea Grant 2012 Small Grant Request (R/ER-100-PD): Improving techniques of water quality monitoring in the Western Basin of Lake Erie, J. Ortiz, K. Ali (College of Charleston), and Nick Bonini (KSU Geology), \$10,000, 2012.
- Ohio Sea Grant 2012 Ship time request: Ship time support for Improving techniques of water quality monitoring in the Western Basin of Lake Erie, J. Ortiz, K. Ali (College of Charleston), and Nick Bonini (KSU Geology), (monetary value ~\$5,000), 2012
- NSF DUE S-STEM Scholarship grant: Scholarships for Broadening Participation in the Sciences, PI: J. Maletic, J. Ortiz, R. Selinger, J. Portman, A. Case, \$599,999; 2012-
- Ohio Sea Grant 2010 Small Grant Request (R/ER-088-PD): A Water Quality
- US State Department, Institute of International Education (SIZ-100-11-GR070), Fulbright Visiting Scholar Program for Iraq at Kent State University, (Key personnel) \$108,000, 2012.
- Monitoring Program in the Western Basin of Lake Erie, J. Ortiz, D. Witter, and K. Ali (KSU Geology), \$10,000, 2010
- Ohio Sea Grant 2010 Ship time request: Ship time support for a Water Quality Monitoring Program in the Western Basin of Lake Erie, J. Ortiz, D. Witter, and K. Ali (KSU Geology), (monetary value ~\$4,979), 2010.
- NSF ARC Grant: Collaborative research: Unraveling the post-Pliocene Arctic Ocean transition to the icehouse climate, J. Ortiz, and L. Polyak (Ohio State Univ.), \$89,137; 2010.

## Awards at KSU (continued)

• NSF DGE IGERT Grant: "Environmental Aquatic Resources Sensing: Basin Science, Business Education and Outreach" (Senior Personnel- assisted in grant writing, participated in program and mentored a student on the award), \$2,896,040; 2009.

- NSF ARC Grant: Collaborative Research: Understanding the physics of the Bering Strait through paleoceanography and modeling, J. Ortiz and Doron Nof (FSU), \$187,969; 2009.
- NSF EAR Grant: Collaborative Research: Spatial and Temporal Patterns of Drought in Western North America during the Holocene, J. Ortiz and M. Abbott (University of Pittsburgh), \$235,416; 2009.
- Ohio Sea Grant Ship time request (R/ES-010-ST): Summer 2009 Water Quality and Heterotropic microplankton Diversity in the Western Basin of Lake Erie, J. Ortiz, D. Witter (KSU Geology), and J. Mou (KSU Biology), (monetary value ~\$3,840), 2009.
- NSF ARC Grant: Collaborative Research: Paleoceanographic constraints on the warming Arctic Ocean, J. Ortiz, L. Polyak (Ohio State Univ.), D. Darby (Old Dominion University), J. Bischof (Old Dominion University), \$134,181; 2008.
- Ohio Board of Regents Research Challenge Grant: Direct Observation of sediment transport during Hurricanes, J. Ortiz (KSU Geology), T. Schmidlin (KSU Geography) and A. Moore (Earlham College), \$46,000; 2007.
- Ohio Sea Grant Ship time request (R/ER-078-ST): A Novel water quality monitoring program for the Western Basin of Lake Erie and Sandusky Bay, J. Ortiz, D. Witter, and N. Wijekoon, (monetary value ~\$4,000), 2007.
- NSF DUE S-STEM Grant: Kent State University Scholarships for Broadening Participation in the Sciences, J. Maletic (KSU CS), J. Ortiz (KSU Geology), R. Selinger (KSU LCI), S. Lee (KSU Chemistry), John Portman (KSU Physics), \$499,896; 2006-2012.
  - NSF Grant: Collaborative Research: Investigating Holocene paleoclimate in the western Arctic Ocean using high-resolution Alaskan Margin records, **J. Ortiz** (KSU), D. Darby (ODU), S. Brachfield (Montclair State), L. Polyak (Byrd Polar Research Center, Ohio State Univ.), \$62,699; 2006-2010.
- NSF ARC Grant: Collaborative research: Understanding the distribution and stableisotopic composition of planktonic foraminifera in the western Arctic Ocean, Collaborative J. Ortiz (KSU), and L. Polyak (BPRC), \$35,097; 2005-2008.
- NSF DGE Grant: Track 1, GK-12 Inquiry-based Approaches to Earth System Science, M. Munro-Stasiuk (KSU), J. Ortiz (KSU), D. Witter (KSU), R. Dinko (Stark County Educational Services Center), S. Sheridan (KSU), and N. BakerCazan (SCECC), \$1,244,131; 2004-2008.
- KSU University Research Council award: Re-evaluation of the Arctic Ocean Sedimentary Stratigraphic Record: Implications for variations in Sea Ice Cover and Future Arctic Climate Change, J. Ortiz, \$3,136; 2006.
- KSU University Research Council award: Travel funds to participate in an Oceanographic research cruise (HLY0501) to the Chukchi Sea aboard the USCGC Healy, J. Ortiz, \$3,500; 2005

## Awards at KSU (continued)

 Ohio Sea Grant Ship time request: Calibration of Remotely-Sensed Suspended Sediment Concentration in the Western Basin of Lake Erie (Case II Waters), J. Ortiz, M. Munro-Stasiuk, and D. Witter, (monetary value \$3,872), 2004.

- NSF OCE Grant: Supplemental Award: Collaborative Research: A high resolution record of productivity and/or ventilation of the northeast Pacific from Soledad Basin, Baja California, J. Ortiz, \$14,927, 2003-2004.
- NSF OCE Grant: Collaborative Research: A high resolution record of productivity and/or ventilation of the northeast Pacific from Soledad Basin, Baja California, Collaborative J. Ortiz, A, van Geen (LDEO), T. Marchitto (LDEO), and Y. Zheng (Queens), \$135,991, 3 years, 2002-2005.
- Kent State University Farris Family Innovation Fund for Early Achievement Grant: Paleoclimate change research off Baja California, J. Ortiz, \$25,500, 2002-2005.
- Kent State University Teaching Council Summer Teaching Development Grant:
   Course development: Teaching aids for a new course, Light Isotope Geology, J. Ortiz, \$6,500, 2002
- Educational Consultant to: Collaborative Research: Connecting with the River: Geoscience Research and Education for Hartford, CT, NSF Geodiversity Grant to S. O'Connell, J. Morrison, and J. Osborn, \$9,222, 2001-2003.

## Prior Awards (\$957,808 from 1990 to 2001)

- NSF DUE Grant: Collaborative Research: The Cross-Rock Collaborative--Science Teachers for the New Millennium, Dr. K. Kastens, J. Ortiz (LDEO), and Dr. P. Solomon (STAC), \$114,966; 2000-2001.
- NSF OCE grant: Subtropical Signatures of Holocene Climate Variability, P. deMenocal and **J. Ortiz**, 3 years, \$246,241, 1999-2001.
- NSF OCE grant: Experimental Determination of Equilibrium and Kinetic Fractionation of Boron, Carbon and Oxygen Isotopes during Carbonate Precipitation, J. Ortiz, A. Sanyal and W. Broecker, 3 years, \$347,061; 1998-2001.
- ODP JOI/USSSP grants: ODP Leg 177 Participation and Post-cruise Science Support: Participation on a Scientific Cruise of the JOIDES Resolution and Post-Cruise Processing of Split Core Analysis Track (SCAT) Records Obtained from ODP Leg 177 sediments, J. Ortiz, \$35,962, 1998-1999.
- Lamont-Doherty Climate Center Grant: *Metabolic Rate and Ca-ATPase in Benthic Foraminifera*, **J. Ortiz**, \$1,900; 1998.
- Lamont-Doherty Climate Center Grant, Diffuse Spectral Reflectance Measurements of Southern Ocean Sediments Recovered during a 1995 Cruise aboard R/V Thompson, J. Ortiz, \$6,000; 1997.
- ODP JOI/USSSP Post-cruise Science Support grant: Spectral Reflectance of North Atlantic Drift Sediments: Developing High Resolution Proxies for Percent Carbonate and Sediment Mineralogy (ODP Leg 162). J. Ortiz and W. Broecker, \$14,500; 1996.
- NSF OCE Grant: Testing Models of Carbon and Oxygen Isotopic Disequilibrium in Planktic Foraminifers, A. Mix and J. Ortiz, \$125,178; 1994-1996.
- NASA Graduate Student Research Fellowship: Comparison of CZCS, AVHRR, and Sediment Trap Flux in the California Current, J. Ortiz, Mentor, Dr. M. Abbott, \$66,000; 1990-1993.

### Research Cruises/Campaigns (Twelve total)

 2015 Sandusky Bay CyanoHAB Bloom campaign; Weekly Field sampling from June to September in collaboration with Bowling Green during multiple day cruises and shorebased spectroradiometer measurements in support of Visible Hyperspectral aerial and remote sensing by NASA.

- 2014 Lake Erie CyanoHAB Bloom campaign; Field sampling during multiple day cruises and shore-based spectroradiometer measurements in support of Visible Hyperspectral aerial and remote sensing by NASA and the Naval Research Lab.
- IMAGES-IPY Eastern Canadian Arctic Expedition, (Halifax-Halifax), CCGS Hudson, [Aug. 24-Sept 23, 2008].
- HOTRAX Leg 1, HLY0501, (Point Barrow, Alaska-Point Barrow, Alaska), USCGC Icebreaker Healy, June, 2005.
- IMAGES MONA Expedition, Leg 2 (San Diego-Panama City), *Marion Dufresnes*, June 7- June 25, 2002.
- ODP Leg 177, Southern Ocean Paleoceanography, R/V Joides Resolution (SEDCO/BP471), Sedimentologist and Operator, OSU Split Core Analysis Track (SCAT), December – February, 1997.
- ODP Leg 162, North Atlantic Arctic Gateways II, R/V Joides Resolution (SEDCO/BP 471), Sedimentologist and Operator, OSU SCAT, July September 1995.
- Four Multitracers Project cruises (W9009A, NH9003A, W8909A, and W8809A) on R/V Wecoma and R/V New Horizon, Assisted in MOCNESS sampling and operation, sediment trap deployment and recovery, gravity and box coring operations, Two-week cruises during September, 1988, 1989, 1990, and March 1990.
- Two Day cruises (NH5 time series) on *R/V Sacajawea*, 37' coastal oceanographic research vessel at Oregon State University. Assisted in horizontal plankton tows with Puget Sound net, Niskin bottle sampling, and CTD deployment, 1991-1992.

## **Patents**

- KSU.348: US Utility Patent Application for "Core measurement stand for use with a portable XRF scanner". Ser. No.: 12/769.892: 2010
- KSU.348: US Provisional Patent for "Core measurement stand for use with a Portable XRF Analyzer", Ser. No.: 61/174,182; 2009

## **Refereed Publications (61 publications)**

(As of 1/2/2016: 38 are ISI-tracked works with a total of 2115 citations for an average citation rate of 55.66 citations per paper and an *h-index* of 19; Google Scholar tracks 3267 citations for an *h-index* of 22, *i10-index* of 32, and an average of 305 citations per year from 2011-15).

GS Bullerjahn, RM McKay, TW. Davis, DB Baker, GL Boyer, LV D'Anglada, GJ Doucette, JC Ho, EG Irwin, CL Kling, RM Kudela, R Kurmayer, AM Michalak, **JD Ortiz**, TG Otten, HW Paerl, B Qin, BL Sohngen, RP Stumpf, PM Visser and SW Wilhelm, Global solutions to regional problems: collecting global expertise to address the problem of harmful cyanobacterial blooms. A Lake Erie case study, Harmful Algae, *in press*, 2016.

## **Refereed Publications (Continued)**

- Lajeunesse, P, Duchesne, MJ, St-Onge, G, Higgins, M, Sanfaçon, R, Ortiz, JD, The Corossol Structure: a glaciated crater of possible impact origin in the northwestern Gulf of St. Lawrence (Eastern Canada) In Atlas of Submarine Glacial Landforms: Modern, Quaternary and Ancient, eds. J. Dowdeswell, M. Canals, M. Jakobsson, B. Todd, E. Dowdeswell and K. Haan, Geological Society of London Memoir, Paper 897, in press, 2015
- Griffith, EM, **Ortiz, JD**, and Jefferson, AJ, Mimicking the Rayleigh Isotope Effect in the Ocean, Oceanography 28(4), 96–101, 2015.
- Bauch, D., Polyak, L, and **Ortiz, JD**, A Baseline for the vertical distribution of the stable carbon isotopes of dissolved inorganic carbon  $\delta^{13}C_{DIC}$ ) in the Arctic Ocean, Arktos, 1(1):1-13, 2015, doi 10.1007/s41063-014-0001-0.
- **Ortiz, JD,** and A.A. Klompmaker, Turbidity currents: Comparing theory and observation in the lab, Oceanography 28(3):220-227, 2015 dx.doi,org/10.5670/oceanog.2015.73.
- Yi, L, Chen, S, **Ortiz, JD,** Chen, G, Peng, J, Liu, F, Chen, Y, Deng, C, 1500-year cycle dominated Holocene dynamics of Yellow River delta, The Holocene, 1-15, 2015.
- Mihindukulasooriya, L.N. **Ortiz, J.D.**, Pompeani D.P., Steinman B.A., and M.A. Abbott, Reconstruction of late Quaternary paleohydrologic conditions in southeastern British Columbia using visible derivative spectroscopy of Cleland Lake sediment, *Quaternary Research* 83 (3), 531–544, 2015, doi:10.1016/j.yqres.2015.02.003
- Lindsay, C.M., Lehman, S.J., Marchitto, T.M., and **J.D. Ortiz**, The Surface Expression of Radiocarbon Anomalies near Baja California during Deglaciation, *Earth and Planetary Science Letters* 422:67–74. 2015, dx.doi.org/10.1016/j.epsl.2015.04.012.
- Ali, K.A., **Ortiz, J.D.**, 2014. Multivariate approach for chlorophyll-a and suspended matter retrievals in Case II waters using hyperspectral data, Hydrological Sciences Journal, 59, 1-14, DOI:10.1080/02626667.2014.964242.
- Ali, K.A., Witter, D.L., Ortiz, J.D., 2014a. Multivariate approach to estimate color producing agents in Case 2 waters using first-derivative spectrophotometer data, Geocarto International, 29, 2, 102-127, DOI:10.1080/10106049.2012.743601.
- Ali, K.A., Witter, D.L., Ortiz, J.D., 2014b. Application of empirical and semi-analytical algorithms to MERIS data for estimating chlorophyll a in case waters of Lake Erie, Environmental Earth Sciences, 71(9), 4209-4220, DOI 10.1007/s12665-013-2814-0.
- Nwaodua, E.C., and **Ortiz, J.D**., Application of quotient normalization technique to minimize errors in diffuse spectral reflectance data collected under various conditions, The Journal of Sedimentary Research, 84, 729-742, DOI: 10.2110/jsr.2014.57, 2014.
- Nwaodua, E.C., and **Ortiz, J.D**., E.M. Griffith, Diffuse spectral reflectance of surficial sediments indicates sedimentary environments on the shelves of the Bering Sea and western Arctic, Marine Geology, 355, 218–233, DOI: 10.1016/j.margeo.2014.05.023 2014.

## **Refereed Publications (Continued)**

Steinman, B.A., Abbott, M.B., Mann, M.E., **Ortiz, J.D.,** Finney, B., and Pompeani, D.P., Ocean-atmosphere forcing of hydroclimate in the Pacific Northwest on centennial timescales, Geophysical Research Letters, DOI: 10.1002/2014GL059499, 2014. Jennings, A.E., Walton, M.E., O´Cofaigh, C., Kilfeather, A., Andrews, J.T., **Ortiz, J.D.,** 

- deVernal, A., and J.A. Dowdeswell, Paleoenvironments during Younger Dryas-Early Holocene retreat of the Greenland Ice Sheet from outer Disko Trough, central west Greenland, J. Quaternary Sci., DOI: 10.1002/jqs.2652, 2014.
- **Ortiz, J.D.**, Witter D.L., Ali K.A., Fela N., Duff M., and Mills L., Evaluating multiple color producing agents in Case II waters from Lake Erie, *International Journal of Remote Sensing*, *34* (24), 8854-8880, 2013.
- Lajeunesse, P., St-Onge, G., Locat, J., Duchesne, M.J., Higgins, M.D., Sanfaçon, R., and **J.D. Ortiz**, The Corossol structure: a possible impact crater on the seafloor of the northwestern Gulf of St. Lawrence, Eastern Canada, *Meteoritics & Planetary Science*, 48, Nr 12, 2542-2558, 2013, DOI: 10.1111/maps.12224. (Cover Story).
- Ali, K.A., Witter, D.L., and **J.D. Ortiz**, Application of empirical and semi-analytical algorithms to MERIS data for estimating chlorophyll a in Case 2 waters of Lake Erie, *Environmental Earth Sciences*; DOI 10.1007/s12665-013-2814-0, published online Oct 1, 2013.
- Mou, X, Jacob, J., Lu, X., Robbins, S., Sun S., **J.D. Ortiz**. Diversity and distribution of free-living and particle associated bacterioplankton in Sandusky Bay and adjacent waters of Lake Erie Western Basin, Journal of Great Lakes Research 2013.
- Ranasinghe, P.N., **Ortiz, J.D.**, Moore, A.L., McAdoo, B., Wells, N., Siriwardana, C.H.E.R, Wijesundara, D.T.D.S., Mid –Late Holocene coastal environmental changes in southeastern Sri Lanka: New evidence for sea level variations in southern Bay of Bengal, Quaternary International, 2013, doi: 10.1016/j.quaint.2013.02.030.
- Ranasinghage, P. N., **Ortiz, J.D.,** Smith, A.J., Griffith, E.M., Siriwardana, C.H.E.R, De Silva, S.N., and Wijesundara, D.T.D.S., 2013, Mid-late Holocene Indian winter monsoon variability from a terrestrial record in eastern and southeastern coastal environments of Sri Lanka, The Holocene, DOI: 10.1177/0959683612475141.
- Klompmaker, A., **Ortiz, J.D.** and Wells, N.A., 2013, How to explain a decapod crustacean diversity hotspot in a mid-Cretaceous coral reef, Palaeogeography, Palaeoclimatology, Palaeoecology, *Early online release*: 3/5/2013: http://dx.doi.org/10.1016/j.palaeo.2013.01.024.
- Duce, R. Benoit-Bird, K., **Ortiz, J.D.**, Woodgate, R. Bontempi, P., Delaney, M., Gaines, S., Harper, S., Jones, B. and L. White, 2012, NSF OCE Urban Myths and the Report of the 2012 Committee of Visitors" EOS, 93(51) 18 Dec. 2012.
- Ali, K.A., Witter, D.L., and **J.D. Ortiz**, 2012, Multivariate approach to estimate color producing agents in Case 2 waters using first-derivative spectrophotometer data, Geocarto International, *Early online release*: 10/30/2012 DOI:10.1080/10106049.2012.743601.
- Darby, D.A., **J.D. Ortiz**, C. E.Grosch, S. P. Lund, 2012, 1,500 year cycle in the Arctic Oscillation identified in Holocene Arctic sea-ice drift, Nature Geosci., 5, 897–900, Advance Online Publication: 11/11/2012, (doi: 10.1038/NGEO1629).
- Bouchard, F., Pienitz, R., **Ortiz, J.D.,** Francus P., and I. Laurion, 2012, Paleolimnological conditions inferred from fossil diatom assemblages and derivative spectral properties of sediments in thermokarst ponds of subarctic Quebec, Canada, Boreas, *Early View first published online: 3 Dec 2012, DOI: 10.1111/bor.12000.*

Yi, L., Yu, H., Xu X., **Ortiz J.D.**, Deng C., Qiang X., and Huang H., 2012, A reconstruction of late Pleistocene relative sea level in the south Bohai Sea, China, based on sediment grain-size analysis, Sedimentary Geology, 281, 88-100, *Early online release:* 9/3/2012, (doi: 10.1016/j.sedgeo.2012.08.007).

- **Ortiz, J.D.,** Nof, D., Polyak, L., St. Onge, G., Lise-Pronovost, A., Naidu, S., Darby, D., and Brachfeld, S. 2012: The Late Quaternary flow through the Bering Strait has been forced by the Southern Ocean Winds. JPO, 42(11), 2014-2029, *Early online release:* 7/19/2012. (doi: 10.1175/JPO-D-11-0167.1).
- Yi, L., Yu H.-J., **Ortiz, J.D.,** Xu, X.-Y., Chen, S.-L., Ge, J.-Y., Hao, Q.-Z., Yao, J., Shi, X.-F., Peng, S.-Z., 2012, Late Quaternary linkage of sedimentary records to three astronomical rhythms and the Asian monsoon, inferred from a coastal borehole in the south Bohai Sea, China, Palaeogeography, Palaeoclimatology, Palaeoecology, vol. 329-330, 101-117, doi:10.1016/j.palaeo.2012.02.020.
- Nof, D., Zharkov, V., **Ortiz, J.D.**, Paldor, N. and E. Chassignet, 2012, The arrested Agulhas retroflection, J. Mar. Res., 69, (Stern Vol. Special Issue), 659-691.
- Ortiz, J.D., Application of Visible/near Infrared derivative spectroscopy to Arctic paleoceanography, IOP Conf. Series: Earth and Environmental Science 14, 2011, 012011 doi:10.1088/1755-1315/14/1/012011, (http://iopscience.iop.org/1755-1315/14/1/012011/pdf/1755-1315\_14\_1\_012011.pdf)
- Nelson, D.B., Abbott, M.B., Steinman, B., Polissar, P.J. Stansell, N.D., **Ortiz, J.D.,** Rosenmeier, M.F., Finney, B.P., and Riedel, J., 2011, Drought variability in the Pacific Northwest from a 6,000-yr lake sediment record, PNAS, http://dx.doi.org/doi/10.1073/pnas.1009194108.
- Marchitto, T.M., Muscheler, R., **Ortiz, J.D.,** Carriquiry, J., and A. van Geen, 2010, Dynamical response of the tropical Pacific Ocean to solar forcing during the early Holocene, Science, 330, 1378-1381, DOI: 10.1126/science.1194887
- Yurco, L., **Ortiz, J.D.,** Leonid Polyak, L., and Darby, D., Reflectance-based clay mineral cycles in Quaternary sediments from the Northwind Ridge: implications for glacial-interglacial sedimentation patterns in the Arctic Ocean, Polar Research, 2010, DOI: 10.1111/j.1751-8369.2010.00160.x.
- Sorhannus, U., **Ortiz, J.D.,** Wolf, M., Microevolution and Speciation in *Thalassiosira weissfloggi*, Protist, 161,237-249, 2010.
- Lei, X., Ling, D., Mei-Xum, Z., Zhang, R.-P., van Geen, A. and **Ortiz, J.D.**, Centennial variations in Sea surface temperature and productivity over the last 14ka from core PC14 off Baja California, [In Chinese with English Abstract], Oceanologica et Limnologia Sinica, 40, 385-392, 2009.
- Witter, D., **Ortiz, J.D,** Palm, S. Heath, R., Budd, J., Assessing the Application of SeaWiFS Ocean Color Algorithms to Lake Erie, Journal of Great Lakes Research, 35, 361-370, 2009.
- **Ortiz, J.D.,** Polyak, L., Grebmeier, J.M., Darby, D.A., Eberl, D.D., Naidu, S., Nof, D., Provenance of Holocene sediment on the Chukchi-Alaskan margin based on combined diffuse spectral reflectance and quantitative X-Ray Diffraction analysis. Global and Planetary Change, (68), 73-84, 2009.
- Darby, D.A., **Ortiz, J.D.,** Polyak, L., Lund, S., Jakobsson, M., Woodgate, R.A., The role of currents and sea ice in both slowly deposited central Arctic and rapidly deposited Chukchi-Alaskan margin sediments, Global and Planetary Change, (68), 58-72, 2009.

Adler, R.E., Polyak, L., **Ortiz, J.D.**, Kaufman, D.S., Channell, J.E.T., Xuan, C., Grottoli, A.G., Sellen, E., Crawford, K.A., Sediment record from the western Arctic Ocean with an improved Late Quaternary age resolution: HOTRAX core HLY0503-8JPC, Mendeleev Ridge. Global and Planetary Change, (68), 18-29, 2009.

- Brachfeld, S., Barletta, F., St-Onge, G., Darby, D.A., **Ortiz, J.D.**, Detrital and diagenetic magnetic signatures of sediment supply and water column stratification in Holocene sedimentary records from the eastern Chukchi Sea. Global and Planetary Change, (68), 100-114, 2009.
- Polyak, L., Bischof, J., **Ortiz, J.D.**, Darby, D.A., Channell, J.E.T., Xuan, C., Kaufman, D.S., Løvlie, R., Schneider, D.A., Eberl, D.D., Adler, R.E., Council, E.A., Late Quaternary stratigraphy and sedimentation patterns in the western Arctic Ocean. Global and Planetary Change, (68), 5-17, 2009.
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- **Ortiz, J.D.,** Application of non-invasive sedimentological methods to sediments from western pacific marginal basins, in Conference on Marine Environments: Past Present and Future Symposium Vol. (Jan., 26-28, 1999, Kaohsiung, Taiwan, R.O.C), 1999.
- deMenocal, P.B., **Ortiz, J.D.,** and M. Sarnthein, Holocene variations in subtropical Atlantic sea-surface temperatures: links to the North Atlantic, PAGES Conference, London, 1998.
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- **Ortiz, J.D.,** and A.C. Mix, Environmental control of oxygen and carbon isotopic disequilibria in asymbiotic planktic foraminifera, *Eos, 77(46)*, F334, American Geophysical Union, Fall Meeting Supplement, 1996.
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- Doose, H., Ortiz, J.D, Prahl, F.G., Suess, E., UK'37 temperature record in the California

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- **Ortiz, J.D.,** Mix, A.C., and R.W. Collier, Planktic foraminifers in MOCNESS tows from the California Current during September, 1990, in ICP IV Abstract Volume, Sarnthein, M., Thiede, J. and Zahn, R. (Eds.), GEOMAR Report 15, Kiel, 1992.
- **Ortiz, J.D.,** and A.C. Mix, The spatial distribution and seasonal succession of modern Foraminifera in the California Current off Oregon, *Eos* 71(43), 1352, American Geophysical Union, Fall Meeting Supplement, 1990.
- **Ortiz, J.D.,** and A.C. Mix, The spatial and temporal distribution of foraminiferal assemblages in the California Current off Oregon: Response to upwelling and seasonal forcing, in Evolution of upwelling systems since the early Miocene (Abstract volume), Summerhays, C.P., Prell, W., and Emeis, K.C., (Eds.), London, 1990.

### **Honors and Awards**

- NASA Group Achievement Award, Lake Erie Aerial Hyperspectral CyanoHAB Monitoring Team, 2015
- Nominee, Kent State University Diversity Trailblazer Award, 2014.
- Semi-Finalist, Alliance for Water Future, Water Quality Innovation Award, 2013.
- NSF Highlight on Darby et al., *Nature Geoscience*, *Advanced Online Publication*: 11/11/2012, (doi: 10.1038/NGEO1629), 2012.
- NSF Highlight on Marchitto et al., *Science*, 330, 1378-1381, DOI: 10.1126/science.1194887, 2010.
- Best Departmental Field Trip Award, West Virginia Stratigraphy Field Trip, 2010
- Appointed to the Ohio Geology Advisor Committee by Governor Ted Strickland, providing advice to the Director of the Ohio Geological Survey, 2009-2012.
- NSF Highlight on Marchitto et al., *Science* 316 (5830), 1456. [DOI: 10.1126/science.1138679] 2007.
- Science Magazine Perspective piece by R. Keeling, ScienceExpress, / www.sciencexpress.org / 10 May 2007 / Page 2/ 10.1126/science.1142326 for Marchitto et al, Science, / www.sciencexpress.org / 10 May 2007 / Page 5 / 10.1126/science.1138679
- Mentoring Excellence Award, KSU Graduate Student Senate, 2007.

## Honors and Awards (Continued)

- Outstanding Teaching Award, KSU Student Disability Services/Ability Unlimited, 2005.
- Science Magazine Editor's Choice Citation for: Ortiz, et al, Geology, 32(6), 521-524, 2004.
- Promoted to full member, Sigma XI, 2003
- Nominee, KSU College of Arts and Sciences Student Advisory Council Distinguished Teacher Award, 2003.

- Nominee, Department of Geology Glenn Frank Teaching Award, 2001.
- American Geophysical Union Editors' Citation: Excellence in Refereeing for Paleoceanography, 1998.

# National/International Invited Talks (16)

- 2015 NASA Lake Erie Field Campaign Data Meeting, Vicarious calibration and visible derivative spectroscopy to estimate the composition of the 2015 CyanoHAB in Sandusky Bay, Lake Erie, Lake Erie Center, Toledo OH, 2015
- 2015 NASA HyspIRI Science and Applications Workshop, *Vicarious calibration and visible derivative spectroscopy to estimate the composition of the 2015 CyanoHAB in Sandusky Bay, Lake Erie*, 13-15 October 2015 (Presented by collaborator Jeff Luvall).
- 2015 IAGLR meeting, *Airborne Hyperspectral remote sensing of Harmful Algal Blooms in Western Lake Erie*, Burlington VT, May 2015 (For collaborator John Lekki).
- 2015 IAGLR meeting, An estimate of the composition of the 2014 Lake Erie CyanoHAB by VNIR derivative spectroscopy, Burlington VT, May 2015.
- 2015 NASA Headquarters Lake Erie HAB Briefing, Algal Identification by Spectral Decomposition of Hyperspectral data during the 2014 Lake Erie Field Campaign, Washing DC, 2015
- 2014 NASA HAB Campaign Data Coordination Meeting, *A Tale of two Cyanophytes: Microcystis and Planktothrix in Maumee and Sandusky Bays*, G. Bullerjahn and J.D.
  Ortiz, Lake Erie Center, Toledo OH, 2015.
- 2014 NASA HAB Campaign Data Coordination Meeting, Summer 2014 CyanHAB field work: Kent State University ASD FieldSpec Spectroradiometer data, Lake Erie Center, Toledo OH, 2015.
- 2014 NASA HyspIRI Science Meeting, *Hyperspectral Visible Derivative Spectroscopy for compositional analysis of CPAs in aquatic systems, CalTech*, Pasadina CA, 2014.
- 2014 NASA HyspIRI Product Symposium, *Decomposition of Hyperspectral data for use in Case 2 Environments*, NASA Goddard Space Flight Center, MD, 2014
- Second annual Water Research Symposium at Kent State University, "Water Infrastructure and Rebounding Cities", Recent developments in phytoplankton identification by hyperspectral remote sensing, October, 31st, 2014.
- 43<sup>rd</sup> International Arctic Workshop 2013, UMass Amherst, *Reconciliation of Physical Oceanographic Theory and Paleoceanographic Data: The Role of The Bering Strait, Southern Ocean Winds and the Atlantic Meridional Circulation*, 2013.

# National/International Invited Talks (Continued)

- Third International IMAGES/PAGES Workshop of Western Pacific Paleoceanography, Kaohsiung, Taiwan, *The impact of the Southern Ocean winds and global fresh water fluxes on the flow through Bering Strait and the Atlantic Meridional overturning circulation during the Holocene*, 2013.
- AGU Chapman Conference on the Agulhas System and its Role in Changing Ocean Circulation, Climate, and Marine Ecosystems, Western Cape, South Africa, *An Indirect estimate of the impact of the Agulhas leakage on the Atlantic Meridional*

- Overturning Circulation during the Holocene, 2012 (Contributed talk).
- Ocean Sciences meeting, Session PA33A, Deciphering the paleoceanographic connection between the North Pacific and Arctic Ocean using non-invasive measurement techniques, 2010.
- 17<sup>th</sup> Biennial Meeting, American Quaternary Association, Anchorage Alaska, *Quaternary Marine Productivity Variations off Baja California*, 2002.
- Fourth International Congress of Paleoceanographers (ICP-VI), Lisbon, Portugal, Non-invasive sediment monitoring methods: Current and future tools for high-resolution climate studies, 1998.

## **Teaching Experience**

- GEOL 6/73067, Carbonate Rocks http://www.personal.kent.edu/~jortiz/carbonates/
- GEOL 4/57024, Environmental Core and Well Logging http://www.personal.kent.edu/~jortiz/envlogging/
- GEOL 21080, Honors Oceanography (Team taught) http://www.personal.kent.edu/~dwitter/oce/s2004/
- GEOL 4/54074, Paleoceanography http://www.personal.kent.edu/~jortiz/paleoceanography/
- GEOL 4/5/72035, Scientific Methods http://www.personal.kent.edu/~jortiz/earthstats/
- GEOL 4/50095, Special Themes in Geology: Light Isotope Geochemistry
- GEOL 4/50095, Special Themes in Geology: Marine Processes http://www.personal.kent.edu/~jortiz/marineprocesses/
- GEOL 21080, Oceanography http://www.personal.kent.edu/~jortiz/ocean/
- GEOL 4/54070, Sedimentology and Stratigraphy http://www.personal.kent.edu/~jortiz/sedstrat/

## **Mentoring Experience**

#### **KSU Postdoctoral Advisees (Three)**

- Dr. Sushma Parab, 2012-, Kent State University, Department of Geology
- Dr. Liang Yi, 2011-2012, now at National Academy of Sciences, People's Republic of China
- Dr. Katrin Monecke, 2007-2008, now at Wellesley College Dept. of Geosciences

#### **Current KSU Graduate Students**

- Nick Bonini, Department and NSF-IGERT EARS funded, Ph.D. student
- Dulcinea Avouris, NASA Ohio Space Grant Fellowship-funded Ph.D. student
- Kalpani Ratnayake Mudiyanselage, Department-funded Ph.D. Student
- Fangyu Zheng, Department-funded M.S. Student
- Amber Huston, Department-funded M.S. Student
- Kyle Carey, Department-funded M.S. Student

## **Doctoral Dissertations Directed (Six)**

- Mihidukulasooriya, Lorita Nivanthi 2014, A multi-proxy reconstruction of paleolimnology and paleoclimatic variables using authigenic lake carbonates from Cleland Lake, British Columbia KSU Ph.D. Dissertation, Kent, OH, 186 p. (NSFfunded Ph.D. student).
- Siriwardana, Chandawimal H.E.R. "Siri", 2014, Characterization of Paleoclimate and Marine Processes Associated with Holocene Glacial Sedimentation on the Chukchi Margin, Arctic Ocean, KSU Ph.D. Dissertation, Kent, OH, 171 p. (NSF-funded Ph.D. student).
- Nwaodua, Emmanuel "Chuks", 2013, Last Deglacial Arctic to Pacific Transgressions via the Bering Strait: Implications for Climate, Meltwater Source, Ecosystems and Southern Ocean Wind Strength, KSU Ph.D. Dissertation, Kent, OH, 182 p. (NSFfunded Ph.D. student).
- Ali, Khalid Adem, 2011, *Prediction of Water Quality Parameters from VIR Spectral Radiometry: Using Lake Erie as a Natural Laboratory for Analysis of Case 2 Waters*, KSU Ph.D. Dissertation, Kent, OH, 264 p.
- Ranasinghage, Pradeep Nalaka, 2010, Holocene Coastal Development in Southeastern-Eastern Sri Lanka: Paleo-depositional Environments and Paleocoastal Hazards, KSU Ph.D. Dissertation, Kent, OH, 437p. (GSA fellowship awardee)
- Wijekoon, Nishanthi, 2007, Spatial and temporal variability of surface cover in an estuarine ecosystem from satellite imagery and field observations, KSU Ph.D. Dissertation, Kent, OH, 181p. (NOAA-funded, NERR, Ph.D. Fellow)

## **Masters Theses Directed (Ten)**

- Brenner, Alan, 2014, *Determination of Baffin Bay Sediment Composition Variability and Provenance*, KSU Geology MS Thesis, Kent, OH, 99p. (Self-funded student)
- Bonini, Nick, 2013, Comparison of VNIR derivative and visible fluorescence spectroscopy methods for pigment estimation in an esturine ecosystem: Old Woman Creek, Huron, Ohio, KSU Geology MS Thesis, Kent, OH, 162p.

## **Masters Theses Directed (Continued)**

- Harrison, Jeffery, 2013, Correlation of Late Holocene sedimentation in the Western Arctic Ocean with an Atmospheric temperature proxy record from a Glacial Lake in the Brooks Range, Alaska, KSU Geology MS Thesis, Kent, OH, 117p.
- Bloxon, Julie, 2012, *Geophysical characterization of the porosity distribution within the Clinton formation, Ashtabula County, Ohio*, KSU Geology MS Thesis, Kent, OH, 96p. (Self- and partial NSF funded student)
- Siriwardana, C.H.E.R, 2011, Paleoclimatic Characterization of Arctic Ocean sediment around the Northwind Ridge using X-Ray Fluorescence and Visible Near Infrared, KSU Geology MS Thesis, Kent, OH, 96p. (NSF-funded M.S. student)
- Mehrotra, Nivedita, 2011, Reconstruction of Holocene Paleoclimate Based on Benthic Foraminiferal Assemblages from Soledad Basin, KSU Geology MS Thesis, Kent, OH, 83p.
- Woodward, Stephen, 2009, Principle Component Analysis of Sediment Deposited in the Village of Titiana from the Solomon Islands Tsunami of April 2, 2007, KSU Geology MS Thesis, Kent, OH, 55p.
- Vlack, Yvette, 2008, A Diffuse Spectral Reflectance Library of Clay Minerals and Clay Mixtures within the VIS/NIR Bands, KSU Geology MS Thesis, Kent, OH, 89p.

- Balogun, Akindele, 2007, High resolution paleoclimate reconstruction of the Rose Run formation of Eastern Ohio using diffuse spectral reflectance, KSU Geology MS Thesis, Kent, OH, 68p. (NSF GK-12 funded MS student).
- Wilsbacher, Matthew, 2007, Reconstructing Past Climate of the Soledad Basin from Planktonic Foraminiferal Faunal Assemblages, KSU Geology MS Thesis, Kent, OH, 77p. (Partial NSF-funded student).

#### **Senior Honors Theses Directed**

- Cope, N., 2009, Reconstruction of a Paleoclimate using Diffuse Spectral Reflectance, KSU Senior Honors Thesis, Kent, OH, 73p.
- Yurco, L., 2007, Glacial-Interglacial grain size and color reflectance variations on the Northwind Ridge, Chukchi Sea: a regional study of Arctic Climate in the Late Pleistocene, KSU Senior Honors Thesis, Kent, OH, 50p.

# **KSU Undergraduate Students**

- Karli Hollister, KSU Biological Sciences undergraduate, McNair Scholar
- Sean Hunter, KSU Geology undergraduate, Volunteer
- Megan Court, KSU Geology undergraduate, Student Worker
- Jessica Dorfman, KSU Geology undergraduate, Student Worker
- Lindsey Brenizer, KSU Geology undergraduate, Student Worker
- Jamael Sadallah, KSU Geology undergraduate, Student Worker
- Daniel Peacock, KSU Geology undergraduate, Summer field assistant
- Renee Crain, KSU Geology undergraduate, Student Worker
- Michael Farinacci, KSU Geology undergraduate, Student Worker
- · Robin Green, KSU Geology undergraduate, Summer field assistant
- Bethany Lavins, Bucknell University, Summer Lab assistant
- Nate Fela, KSU Geology undergraduate and NSF S-STEM fellowships recipient and Undergraduate Research Scholar recipient
- Lonnie Mills, KSU Geology undergraduate and NSF S-STEM fellowships recipient

#### **KSU Undergraduate Students (Continued)**

- Michael Duff, KSU Geology undergraduate, Undergraduate Research Scholar recipient
- Chelsea Orsbourn, KSU Geology Honors undergraduate
- Lyanne Yurco, KSU Geology Honors undergraduate
- Allie Sherwood, KSU Geology Honors undergraduate
- · Kathleen Wilson, WRRI REU Student
- Drew Feucht, WRRI REU Student (co-mentor with M. Munro-Stasiuk)
- Sarah Reagan Palm, WRRI REU Student (co-mentor with D. Witter)
- Chris Stefano, KSU Geology undergraduate
- Nathan Saraceno, KSU Geology undergraduate, Student volunteer
- Christopher Wargo, Honors Independent Study
- Christopher Mauser, Independent Study

### **Doctoral Committee Service (Twenty-four)**

 Waugh, Matthew, in progress, Characterizing Slope Stability of Colluvial Soils in Ohio Using LiDAR Data, (Ph.D. Committee member; Shakoor advisor, Geology).

- Widanagamage, Inoka Hasanthi, in progress, *Stable strontium isotope fractionation* ( $\Delta^{88/86}Sr$ ) in abiotic and microbially mediated barite in modern continental settings, (Ph.D. Committee member; Griffith advisor, Geology).
- Alnaeli, Saleh, 2015, A Transformational Approach to Automatically Adapt Source Code for Enhanced Parallelizability (Ph.D. Committee member; Maletic advisor, Computer Science).
- Ballinger, Thomas, 2015, A Synoptic Climatological Assessment of the Relationship between Regional Arctic Sea Ice Variability and Climatic Anomalies over North America (Ph.D. Committee member; Sherridan, advisor, Geography).
- Xinxin, Lv, 2015, Microbially Mediated Transformation of Dissolved Nitrogen in Aquatic Environments (Ph.D. Committee member; Mou, advisor, Biological Sciences)
- Alali, Abdulkareem, 2014, Improved methods for mining software repositories to detect evolutionary couplings, (Ph.D. Committee member; Maletic advisor, Computer Science).
- Johnston, Gloria, 2014, Characterization of bacterial communities of riverbank sediments contaminated with polycyclic aromatic hydrocarbons (Graduate Faculty Representative; Leff, advisor, Biological Sciences).
- Hui-Juan Pan, Ph.D. student, visiting doctoral scholar from National Taiwan Ocean University, 2013-2014.
- Clevinger, Curtis, 2013, Nitrification and the contribution of Nitrification to oxygen consumption in Lake Erie (Ph.D. Committee member; Bade, advisors, Biological Sciences).
- Meqdadi, Omar, 2013, *Automatic Identification of Adaptive Changes from Software Version Histories* (Ph.D. Committee member; Maletic, advisor, Computer Science).
- David Waugh, 2013, Utility of fossil cuticle morphology applied to the taphonomy and taxonomy of decapod crustaceans (Ph.D. Committee member; Feldmann, advisor, Geology).

## **Doctoral Committee Service (Continued)**

- Frantescu, Adina, 2013, Comparative Study of the Eocene Fossil Decapod Crustaceans of the North American Atlantic Coast and European Tethyan Provinces (Ph.D. Committee member; Feldmann, advisor, Geology).
- Frantescu, Ovidiu, 2013, Systematics, Paleobiogeography, and paleoecology of Cretaceous decapod fauna, from Northeastern Texas (Ph.D. Committee member; Feldmann, advisor, Geology).
- Hoblos, Jalaa, 2013, Access Disparity Modeling and fairness provisioning in multihop wireless networks, (Ph.D. Committee member; Peyravi, advisor, Computer Science)
- Assareh, Amin, 2012, Improving diversity in classification and regression tree ensembles by manipulating the hypothesis space traversal of each individual (Ph.D. Committee member; Volkert advisor, Computer Science).
- Gautam, Tej, 2012, An investigation of disintegration behavior of mudrocks based on laboratory and field tests, (Ph.D. Committee member; Shakoor advisor, Geology)
- Klompmaker, Adiel, 2012, *Mesozoic decapod diversity with an emphasis on the early Cretaceous (Albian) of Spain*, (Ph.D. Committee member; Feldman advisor,

Geology).

- Feinstein, Larry, 2012, *Microbial functional activity and diversity patterns at multiple spatial scales*, (Ph.D. Graduate Representative and Moderator; Blackwood advisor, Biological Sciences).
- Johnstone, Jennifer, 2012, Reinterpreting Welshness: Sounds and choral membership in cultural identity (Ph.D. Graduate Representative and Moderator; wa Mukuna Advisor, Musicology-Ethnomusicology).
- Hollinger, David, 2011, Crop condition and yield prediction at the field scale with geospatial and artificial neural network applications, Kent State University Geography, (Ph.D. Outside Committee member; Munro-Stasiuk advisor, Geography).
- Dalqamouni, Ahmad, 2010, Development of a landslide hazard rating system for selected counties in Northeast Ohio, Kent State University Geology, (Ph.D. Committee member; Shakoor advisor, Geology).
- Maen, Hammad, 2010, Supporting Code-Design Consistency During Software Evolution Kent State University Computer Science, (Ph.D. Outside Committee member; Maletic advisor, Computer Science).
- Maldonado, Anita, 2008, Negotiating a sense of place: a study of Hispanic faculty in predominantly white institutions, Kent State University Education, (Ph.Ed. Outside Committee member; Michael advisor, TLCS).
- Jovanelly, T. J., 2006, Tsunami Origin for an ~1100 year old enigmatic sand sheet in Lynch Cove, Puget Sound, Washington, Kent State University Geology (Ph.D. Committee member; Moore Advisor, Geology)
- Santmire, Judy, 2005, Bacterial communities in a Northeast Ohio stream: effects of substrate size, environmental features and temporal changes, Kent State University Biological Sciences (Ph.D. Moderator; Leff Advisor, Biological Sciences).

## **Masters Committee Service (Nine)**

- Engle, Kevin, 2015, A Late Glacial-Early Holocene Paleoclimate Signal from the Ostracode Record of Twin Ponds, Vermont (M.S. Committee member; Smith advisor, Geology).
- Reilly, Darren, 2014, *Identification of Local Ground Water Pollution in Northeastern Pennsylvania: Marcellus Flow-back or Not?* (M.S. Committee member; Jefferson and Singer co- advisors, Geology).
- Onur, Emine, 2014, Predicting the permeability of sandy soils from grain size distributions, (M.S. Committee member; Shakoor advisor, Geology).
- Wells, Kathryn, 2011, Paleoecology of Beringian Lacustrine deposits as indicated by Northern Hemisphere Ostracode Biogeography, (M.S. Committee member, Smith Advisor, Geology).
- Maharjan, Madan, 2011, Interpretation of domestic water well production data as a tool for detection of transmissive bedrock fractured zones under cover of the glacial formations in Geauga County, OH, Kent State University Geology, (M.S. Committee member; Eckstein advisor, Geology).
- Razzano, Mandy, 2011, Monitoring algal production in Akron water supply reservoirs

- *in Northeast Ohio using satellite imagery*, Kent State University Geology (M.S. Committee member; Witter advisor, Geology).
- Nowicki, Lisa, 2011, Engineering Geology considerations for realignment of interstate 70/76 across the landslide at new Baltimore, Somerset county, SW Pennsylvania, Kent State University Geology (M.S. Committee member; Shakoor advisor, Geology).
- Weghorst, P. L. 2008, MODIS Algorithm Assessment and Principal Component Analysis of Chlorophyll Concentration in Lake Erie, Kent State University Geology (M.S. Committee member; Witter advisor, Geology).
- Hubbard, Michael, 2006, Soapstone vessels in the Ohio River Valley and determining their source of origin using visible/near-infrared reflectance spectrometry, Kent State University Anthropology (M.S. Committee member, Seeman Advisor, Anthropology).

## **Mentoring Experience, Prior Institutions**

#### **Post-doctoral Advisee**

• Co-mentor, Dr. Richard Zeebe (LDEO), 1999-2000, SOEST - University of Hawaii

## **Undergraduate Advisees**

- Co-Mentor to Jeff DelViscio (Wesleyan), Senior Undergraduate Honors thesis: Decadal-scale climate variability in the Northeast Pacific Oxygen Minimum Zone: Evidence from carbonate and organic carbon records, 2001.
- LDEO Research Experience for Undergraduates (REU), Co-mentor to Jeff DelViscio (Wesleyan) Centennial to Decadal Variability in Soledad Basin sediments, Baja California, 2001.
- LDEO Research Experience for Undergraduates (REU), Co-mentor to Adam Goss (Wesleyan). *Elemental ratios of North Atlantic sediments as a climate proxy*, 1999.

### **Undergraduate Advisees (Continued)**

- Co-mentor to Ben Raker (Wesleyan)
   Senior Undergraduate Honors thesis: True colors of climate change: Spectral Reflectance analysis and the Southern Ocean paleoenvironment during the Mid-Pleistocene Revolution, 1998-1999.
- Co-Mentor to Jai Ranganathan (Wesleyan)
   Senior Undergraduate Honors thesis: Optical methods for determining calcium carbonate concentrations within Ocean Drilling Program sediment cores, 1996-1997.

### **Informal Education Experience**

- Portage County Sierra Club, Potential climate change impacts in Ohio, Oct 20, 7pm
- Kent State University Honors College Secret Cellar Speakers Series, *Climate Change: Global and Local impacts*, Aug 5, 2015.
- Panel Discussion Participant, How Global Warming Affects Us and What we can do to save ourselves, UU Church and Kent Environmental Council, Sept 21, 2015.
- Deep Horizons, Virtual World Conference Water Quality: Harmful Algal Blooms (HABs) in Lake Erie, Keynote speaker, Ohio Aerospace Institute Virtual Distance

- Learning Academy, 2015
- Science Friday at Old Woman Creek "New methods for monitoring Harmful Algal Blooms in water bodies - insights from reflectance measurements at Old Woman Creek and Beyond", Old Woman Creek NOAA/NERR Public lecture series, Huron, OH, 2014.
- Judge, Undergraduate Research Posters, 2012 Ocean Sciences Meeting, Salt Lake, UT, 2012.
- Ohio Sea Grant Research Spotlight Interview, Lake Erie from Above... Way Above by C. Doerkes, Twinline volume 23, no. 4, Fall/Winter Edition, 2011. (http://ohioseagrant.osu.edu/\_documents/twineline/v33i4.pdf)
- Northeast Ohio Chapter American Meteorological Society Public lecture, *Potential Local Impacts of Global Climate Change*, 2012.
- Aurora Conservation Council's Moebius Nature Center Public lecture series, Life in the Greenhouse: Climate Change, 2012
- Aurora Conservation Council's Moebius Nature Center Public lecture series, *Living in the Greenhouse*, 2008.
- Northeastern Ohio Geological Society Public Lecture, *Quaternary Arctic Paleoceanographic Circulations Changes*, 2008.
- Geauga Parks District Public lecture, "Engage the Ice Age" Speakers Series, "Ice Ages and Abrupt Climate Change: A Marine Perspective, 2005.
- Consultant to NSF Geodiversity Education Grant, Connecting with the River: Geoscience Research and Education for Hartford, CT (Pl's S. O'Conell, J. J. Morrison, J. Osbourn), 2001-2003.
- Scientific Partner, Signals of Spring (http://www.signalsofspring.com), 2000-2004.
- Leadership team member, Earth2Class (<a href="http://www.earth2class.org">http://www.earth2class.org</a>), 2000-2001.
   Distance learning based, continuing education program, serving middle and high school Earth Science teachers in the Northeastern United States.

## Informal Education Experience (Continued)

- Co-Organizer, Project STEF (Science Teachers Ensure the Future) Workshop, 2000 NSF funded teacher enhancement and mentoring workshop designed to improve the quality and quantity of earth science teachers in New York Metro Area.
- Saturday Workshops for Educators, CO<sub>2</sub> Studies and climate changes, 1999.
   Lectured on climate and climate change as part of a K-12 teacher training program conducted in cooperation with: Westchester Section of STANYS, Eastern Section of the National Association of Geoscience Teachers (NAGT) and the American Meteorological Society Maury Project Peer trainers program (In conjunction with Dr. Michael Passow, White Plains Middle School).
- LDEO Open House, CO<sub>2</sub>: Where does it come from? Where does it go?, 1998. Demonstration for K-12 students and parents monitoring effects of photosynthesis, respiration and fossil fuel combustion on [CO<sub>2</sub>] in an enclosed space using a nondispersive IR CO<sub>2</sub> sensor (In conjunction with Drs. Lex van Geen and Kim Kastens).
- LDEO Open House, Core-Lab Exhibit: *Planktic Foraminifers!*, 1996, 1997. Interactive presentation on taxonomy and ecology of planktic foraminifers for K-12 students and parents (In conjunction with Rusty Lotti, LDEO Corelab Curator).

## **Invited Meeting and Workshop Participation (30 total)**

- NSF CyanoHAB workshop, Global Solutions to Regional Problems, Bowling Green, OH, 2015.
- NSF US-Swedish I/B Odin Arctic Research Collaboration meeting, Stockholm, SE, 2015.
- NASA Great Lakes Workshop Series on Remote Sensing of water quality, NOAA GLERL Ann Arbor Michigan, 2014.
- Breakout Session leader, NASA Great Lakes Workshop Series on Remote Sensing of water quality, Ohio Aerospace Institute, Cleveland OH, 2014.
- Expert Witness Fellow, NSF-funded, 3<sup>rd</sup> Expert Witness Training Academy, William Mitchell College of Law, St. Paul, MN, 2013.
- Participant, NSF-funded, Second *R/V Sikuliaq* Science Workshop, 2012.
- Participant, NSF-funded Beaufort Sea Drilling workshop, Kananaskis, CA, 2012.
- Co-Chair, Beaufort Sea Working Group, IODP workshop, "Overcoming barriers to Arctic Ocean Drilling: the site survey Challenge", Copenhagen, Denmark, 2011.
- Participant, NSF-funded, 1<sup>st</sup> Expert Witness Training Academy, William Mitchell College of Law, St. Paul, MN, 2011.
- Participant, NSF-funded, First R/V Sikuliag Science Workshop, 2011.
- Convener, Session T7, Theory and Application in Cenozoic Paleoclimate Studies, 2011 Northeast/North Central GSA meeting, Pittsburgh, PA, 2011.
- Guest Lecturer Integrated Ocean Drilling Program Summer School 2010 Canada, University of Quebec at Rimouski, 2010.
- Participant, NSF Post-ESH Paleoclimate Planning Workshop, 2007.
- Participant, NSF Graduate K-12 Fellowship Program Annual Meeting, 2007.
- Member, COREWALL Steering Committee, and participant, JOI sponsored COREWALL Planning Meeting, 2006.

## **Invited Meeting and Workshop Participation (Continued)**

- Co-Convener, Session T1, Monitoring Environmental Properties of Large Lakes, North Central Section GSA 40<sup>th</sup> Annual meeting, 20-21 April 2006, University of Akron, Akron, Ohio.
- Co-Convener, Session T23, Undergraduate Research Poster Session, North Central Section GSA 40<sup>th</sup> Annual meeting, 20-21 April 2006, University of Akron, Akron, Ohio.
- Participant, Digital Library for Earth System Education (DLESE) Data Services Workshop, 2004.
- Speaker, "Constructivist Activities in Large Class Settings", Transforming University Teaching in Mathematics and Science NEOCEx Conference, KSU, April 28, 2004.
- Participant, NSF-ATM/IMAGES workshop on Image analysis, Sediments and Paleoenvironments, Conveners: P. Francus, R. Bradley, and J. Thurow, University of Massachusetts, Amherst, 2001.
- Participant, NSF workshop on Collaboratives for Excellence in Teacher Preparation (CETP), March, 2001.
- Co-Chair, IMAGES Western Pacific Margins (WEPAMA) Workshop on Paleoceanography of western Pacific marginal basins, (Taipei, Taiwan, R.O.C.), Feb, 2001.
- Participant, "Experiments in Active Learning", Keck Foundation Undergraduate Teaching Workshop focusing on data rich teaching strategies, Aug., 2000.

- Section leader, CORE/MATE Workshop on Future Trends for Marine Technicians and Technology in the Academic Workplace, Seattle, Washington, September, 1999.
- Co-Convener, Stable Isotopes and Trace Substances: Their Use in Oceanography and Climate Research on Various Time Scales (IUGG 99), Birmingham UK, July, 1999.
- Co-Secretary, IMAGES Western Pacific Margins (WEPAMA) Working Group, (Kaohsiung, Taiwan, R.O.C.), International working group formulated by IMAGES to evaluate and implement giant piston coring sites and objectives for the *Marion Dufrense* in the Western Pacific, January 27-28, 1999.
- Session Rapporteur, Climate Forcing on Short Timescales (External & Internal Mechanisms), Session 07 of the Conference on Multiple Platform Exploration (COMPLEX, Vancouver, BC), May, 1999.
- Co-Convener, NOAA/CORC Southern Ocean Ventilation Workshop: Assessing Southern Ocean Ventilation Power at Present and during the Last Glacial Maximum, June, 1998.
- ICTP Conference on Warm World Climates, (Trieste, Italy), Organizer Dr. G. Philander (Princeton), Presentation (with J. Lynch-Stieglitz; L-DEO): A synthesis of the oceanic response during the Hypsithermal, 1997.
- Participant, NSF Workshop, Working Group on LGM Oceanic SST, Organizers: Drs. W. Prell (Brown), A. Mix (OSU), 1997.

# Service to the University

- Member, Women in STEM committee, 2013-
- Judge, 29th Annual Graduate Research Symposium, 2014.
- Member, 1<sup>st</sup> Annual Undergraduate Research Symposium Organizing Committee, 2014.

## Service to the University (Continued)

- Member, Provost's Ad Hoc Committee on Undergraduate Research 2013-2014.
- Member, Student Compensation Evaluation Committee, 2013-2014.
- Provost's Faculty Associate for Diversity, Equity, and Inclusion, 2012-2014
- Member, Academic Strategic Planning Committee, 2012-2013
- Co-Chair, Kent State University Climate Study, 2012.
- Keynote Speaker, "Aspira 2010", Hispanic undergraduate recruitment program, KSU Admissions, 2010.
- Member, Director of Sponsored Programs Search Committee, 2010.
- Member, Ad hoc Graduate School Evaluation Committee, 2009.
- Member, Ad hoc Kent Curriculum Implementation Committee, 2009-2010.
- Keynote Speaker, "Aspira 2009", Hispanic undergraduate recruitment Program, KSU Admissions. 2009.
- Co-moderator, College of Education, Health and Human Services / Faculty Professional Development Center Summer Exploratorium Session on Undergraduate Research, 2008.
- Member, Ad Hoc Committee to consider a University Graduate Council, 2008.
- Moderator, President's Summer Academy Workshop on Undergraduate Research, 2008.
- Member, Provost's 21<sup>st</sup>-Century Mission Statement Stakeholders Working Group 2008. (Commendations for 2008 and 2009).

- Presenter, KSU Faculty Professional Development Center Workshop, New Faculty Institute, sessions on "Dynamic Learning and Teaching", and "Scholarship Creative Arts, Research: Making Connections", 2008.
- Session Leader, KSU Faculty Professional Development Center Workshop, "Excellence in Honors", 2008.
- Co-chair, AQIP Undergraduate Research Action Committee, 2007.
- Honors College Dean Search Committee, 2007-8.
- Panel Moderator, 22nd Annual KSU Graduate Student Senate Colloquium, 2007.
- Undergraduate Research Advisory Committee, 2007.
- Participant, Summit on Funded Research, 2007.
- Honors College Advisory and Planning Committee, 2004-2006.
- Panel Moderator, 20th Annual Graduate Student Senate Colloquium, 2005.
- Speaker, KSU new faculty orientation program, 2005.
- Member, Kent State University Diversity Advisory Committee, 2002-2004.
- NEOCEx Advisory Board, 2003-2005
- Graduate Recruitment Subcommittee of the KSU Enrollment Planning Steering Committee, 2003-2004.
- KSU Undergraduate Research Working Group, 2003-2004.

## Service to the College

- Member, Arts and Sciences Ad Hoc Committee to develop an Interdisciplinary Environmental Studies Major, 2014-
- Member, Arts and Sciences Graduate Council Member, 2012-
- Member, Arts and Sciences College Advisor Council, 2014-2015
- Member, Physics Department Internal Review Committee, 2012
- Member, Anthropology Department Internal Review Committee, 2011

#### Service to the College (Continued)

- Assistant Director of the Water Resources Research Institute (WRRI), Kent State University, 2006-8.
- Member, Arts and Sciences Graduate Council, 2006-2009.
- Geography Department Internal Review Committee, 2005.
- Arts and Sciences Undergraduate Recruitment in the Sciences Working Group, 2004-2005.

#### **Service to the Department**

- Graduate Coordinator, Department of Geology, 2012-
- Member, Department of Geology Faculty Advisory Committee, 2002-2004, 2006-2008, 2013-2015.
- Internship and Employment Coordinator, Department of Geology, 2009-2014.
- Member, Curriculum Committee, 2010-2013.
- Graduate Coordinator, Department of Geology, 2006-2009.
- Chair, Department of Geology, Website and Computer committee, 2002-2005, 2009.
- Member, Department of Geology, Website and Computer Committee, 2002.
- Member, Department of Geology Graduate Studies Committee, 2001-2005.
- Member, Kent State University Department of Education Ad-Hoc Science Education Search Committee, 2003.
- Chair, Department of Geology AQIP committee, 2002.

#### Service to the Field

- Ohio Space Grant Consortium Campus Representative, 2014-
- Member, National Science Foundation Division of Ocean Sciences Committee of Visitors, 2012.
- Lead Guest Editor, TOS Arctic Oceanography Special Volume, September 2011.
- Sponsorship Co-Chair, 2011 Northeast/North Central GSA meeting, Pittsburgh, PA, 2011.
- Contributor to Andrew Revkin's Dot Earth Blog published by the NY Times online, 2010. (May 10, 2010 | May 14, 2010 | May 19, 2010)
- Member, Integrated Ocean Drilling Program (IODP) United States Implementation Organization (USIO) Scientific Ocean Drilling Vessel (SODV) JOIDES Resolution, Scientific Review Panel, College Station, TX, June, 2008.
- Panel Member for eight NSF Panels including: MGG, ESH, STEMTP, and Robert Noyce Scholarship Programs, 2002-present
- Participant, three NSF ESH Holocene Pls meetings, 2005, 2006, 2007
- AMQUA Councilor for Marine Geoprocesses, 2004-2008.
- Editorial Review Board, Kluwer Encyclopedia of Paleoclimate, 2003-2006.
- One of two reviewers of the ODP MST Legacy Data CD-ROM Format, requested by JOIDES SCIMP with direct response to the JOIDES Director, Dr. Nick Pisias.
- Member, JOIDES Scientific Measurements Panel (SCIMP) Ad-hoc Working Group on Core-Log-Seismic Integration, 2000-2001.
- Member, GEOLOGY Editorial Board, 1998-2001.
- Member, JOIDES Scientific Measurements Panel, (SciMP), 1999-2001.
- Member, four JOIDES, Post-cruise US Science Support Review Panels for ODP Legs, 1996-completion of program.

## Interdepartmental and Departmental Seminars (35 total)

University of Akron, Department of Geosciences Seminar Series, *Toxic Algae in Ohio Waterways*, Sept 17, 2015

Kent State University Department of Chemistry Seminar Series, *Identification of toxic algae in Ohio's waterways by visible derivative spectroscopy*, Oct 8, 2015

NASA Glenn Rocket University Working group, Summer 2014 CyanHAB field work: Kent State University ASD FieldSpec Spectroradiometer data 2015

Department of Meteorology Seminar Series, Penn State University, Solar Variability and the Arctic Oscillation during the Holocene, 2013

Department of Geography, Kent State University, *Inter-hemispheric constraints on Holocene variations in the Atlantic Meridional Circulation*, 2011.

Oregon State University, College of Oceanic and Atmospheric Sciences, *The Bering Strait and the AMOC*, 2010.

Keynote Speaker, *Physical Aspects of Climate Change in the Arctic Marine Environment*, for Earth Day 2010, "A changing Earth: The facts about global climate change and biodiversity loss", 2010.

Department of Computer Science, Kent State University, The Arctic Response to Global Change: Models and data, 2009.

Department of Geology, Kent State University, Earth Science Week, *The Arctic Response to Global Change*, 2009.

- University of Akron, Arctic Paleoceanography from sediment physical properties: Results from the Healy-Oden Transarctic Expedition (HOTRAX), 2007.
- University du Montreal á Quebec, GEOTOP, Non-invasive Paleoceanographic tools for Arctic Climate Change Research: Results from Healy-Oden Transarctic Expedition (HOTRAX), 2007.
- University du Montreal á Rimouski, ISMER, Non-invasive Paleoceanographic tools for Arctic Climate Change Research: Results from Healy-Oden Transarctic Expedition (HOTRAX), 2007.
- College of Wooster, Department of Geosciences, *Total Suspended Particulates in Old Woman Creek and the Western Basin of Lake Erie*, 2007.
- Cleveland State University, Department of Biological, Geological and Environmental Sciences, *Total Suspended Particulates in Old Woman Creek and the Western Basin of Lake Erie*, 2007.
- Indiana University-Purdue University Indianapolis (IUPUI), Department of Geology, Assessing Total Suspended Particulates in Old Woman Creek using Landsat Multispectral Data, 2006.
- University of Pittsburgh, Department of Geology and Planetary Science, *Holocene and Late Pleistocene Climate Change off Baja California*, 2004.
- College of Wooster, Department of Geology, *Climate studies with a non-destructive tool*, 2003.
- Ohio University, Department of Geological Sciences, *Estimating Marine Export Productivity off Baja California during the last 60,000 years: Paleoclimate Implications*, 2002.

## Interdepartmental and Departmental Seminars (Continued)

- University of South Carolina, Department of Geological Sciences, *Warm, productive, Interstadial events off Baja California, 2003.*
- Kent State University Department of Geology, *Lithostratigraphy of Giant Piston Cores from the Baja Margin The MONA Expedition*, 2002.
- Trinity College (Hartford, CT), Sands of time: Climate lessons from the bottom of the sea, 2002.
- Cleveland State University, Department of Biological Geological and Environmental Sciences, Quaternary marine production cycles with a millenial beat off Baja California, 2002.
- University of Akron, Department of Geology, Reflections of the North Atlantic Stadial/Interstadial events as marine organic carbon cycles off Baja California, 2001.
- Kent State University, Department of Geology, *Millennial scale carbonate and organic carbon cycles in Late Pleistocene sediments off Baja California Do they reflect production or preservation?* 2001.
- Georgia State University, Department of Geology, Millennial scale carbonate and organic carbon cycles in Late Pleistocene sediments off Baja California Do they reflect production or preservation? 2001.
- University of Illinois, Urbana-Champaign, Department of Geology, *Millennial scale* carbonate and organic carbon cycles in Late Pleistocene sediments off Baja California Do they reflect production or preservation? 2001.
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#### **External Professional Affiliations**

American Geophysical Union (AGU) The Oceanography Society (TOS)
The Geological Society of America (GSA) American Meteorological Society (AMS)
Northeast Ohio Geological Society (NOGS) Sigma Xi (Scientific research honor society)