

School of Geosciences

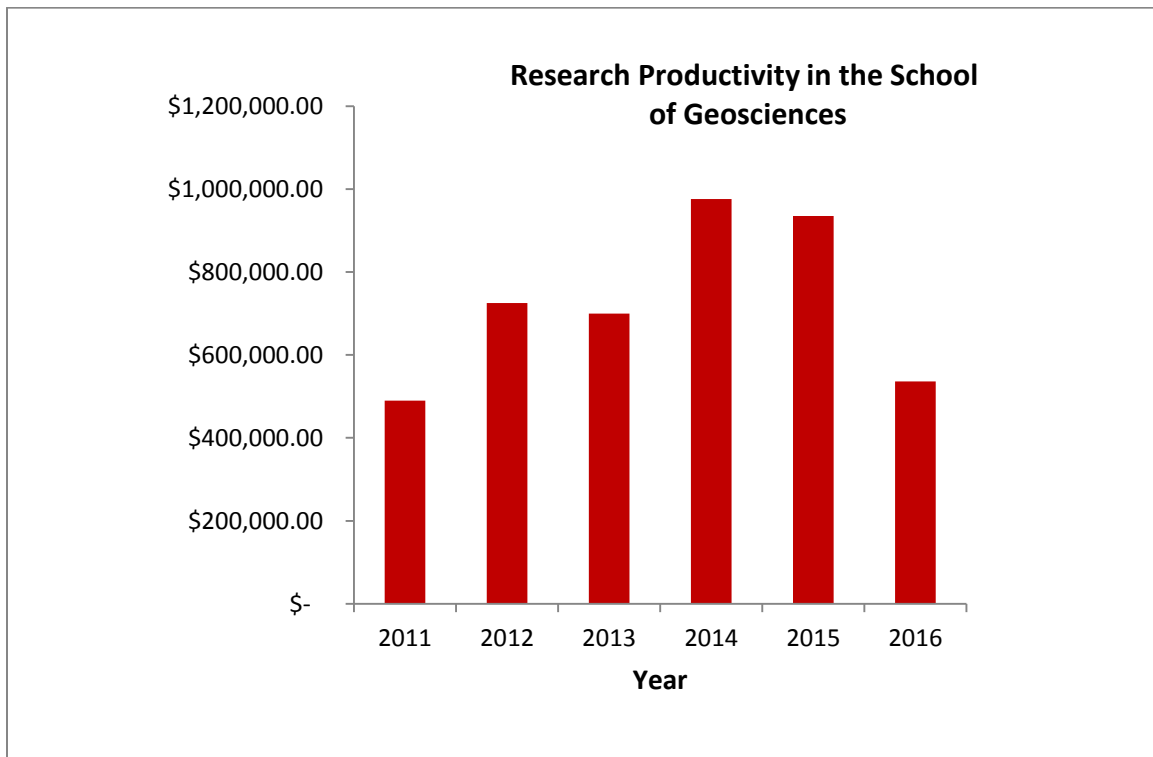
Summary

The School of Geosciences, formed in fall semester of 2012, brings together the programs of Geology and Environmental Sciences (<http://geos.louisiana.edu/>). Our mission is to provide maximum value to our students, our community, and society through education and research focused on Energy and the Environment. The School of Geosciences consists of 11 full-time tenure-track faculty (7 in Geology, 4 in Environmental Sciences), 4 instructors, more than 150 undergraduate majors, and 90 graduate students. We offer separate undergraduate programs in Geology and Environmental Science and a MS-degree in Geology. A MS-degree program in Environmental Resource Science will begin in Fall semester of 2017.

Here we summarize the scholarly productivity of the faculty in the School of Geosciences from 2011 to 2016. Data collected for the years prior to the formation of the School of Geosciences (2011) were gathered separately for the appropriate faculty members and were combined to make this report.

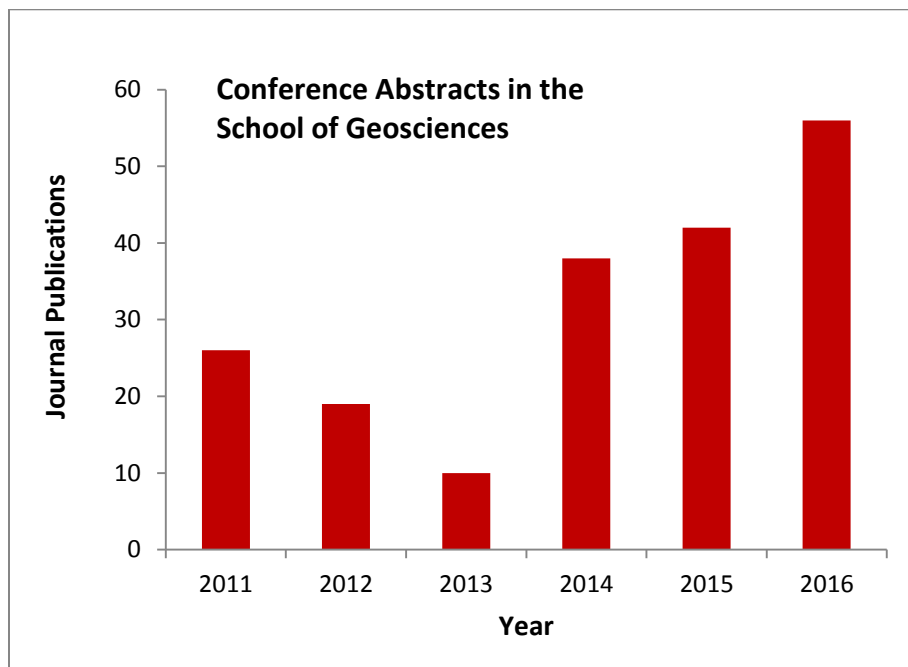
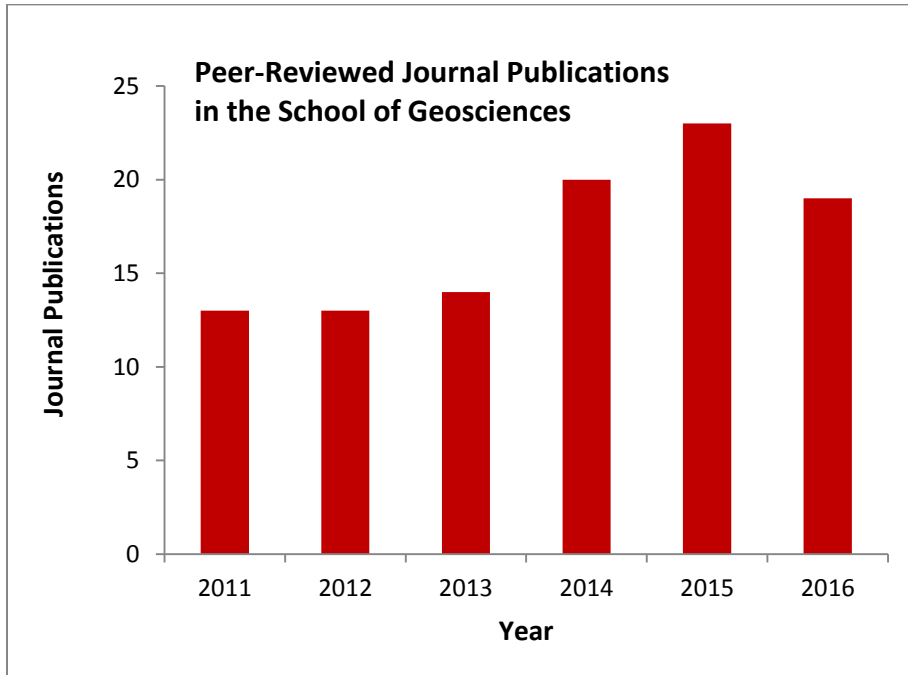
Research dollars.

Faculty in the School of Geosciences have produced \$727,000 in research dollars per year (average from 2011 to 2016), which is about \$66,000.00 per faculty member per year.



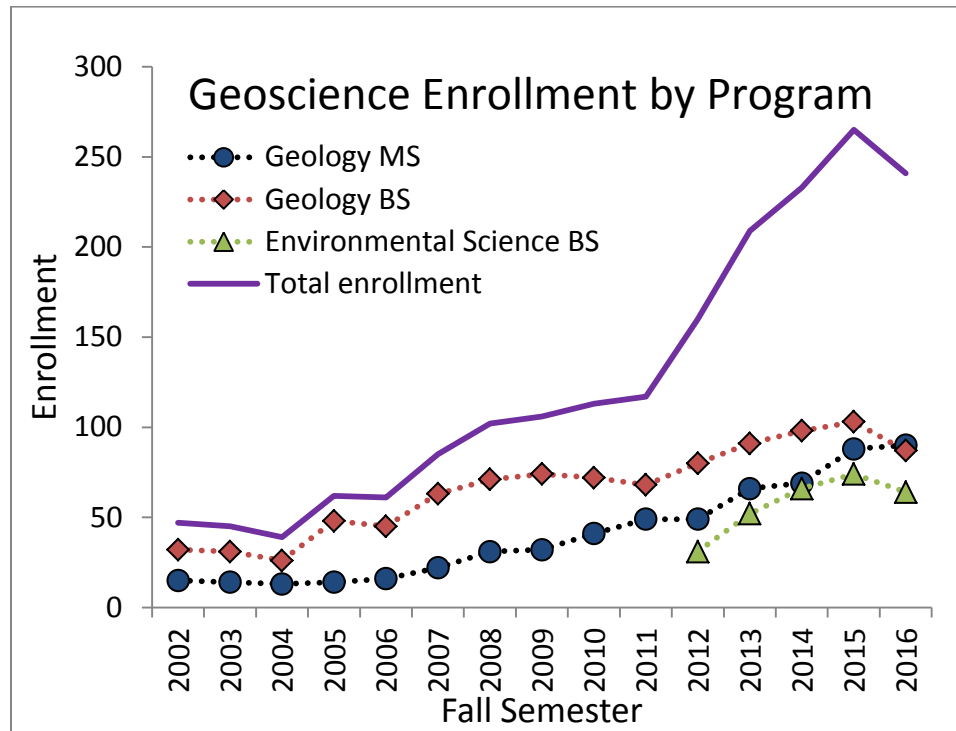
Peer-reviewed journal publications and abstracts.

Since 2011, faculty in the School of Geosciences have produced 17.0 peer-reviewed manuscripts per year, which is ~1.6 per year per faculty member. In addition, since 2011, the faculty in the School of Geosciences have produced 31.8 conference abstracts/proceedings per year or 2.9 per faculty member annually.



Enrollments.

In 2016 the School had a total of 241 students, including 90 Geology graduate students, 87 Geology undergraduate students, and 64 Environmental Science undergraduate students. Note that the Environmental Science program began in 2012.



Publications, Presentations, Editorships, and Talks

Peer-Reviewed Journal Publications (Published and Accepted/In-Press Only)

2016

1. Eldardiry, H., Habib, E., **Borrok, D.M.** (2016) Small-scale catchment analysis of water stress in wet regions of the U.S., an example from Louisiana. *Environmental Research Letters*. 11, 124031 (doi:10.1088/1748-9326/aa51dc)
2. VanHazebroeck, E., **Borrok, D.M.** (2016) A new method for the inorganic geochemical evaluation of unconventional resources: An example from the Eagle Ford Shale. *Journal of Natural Gas Science and Engineering* 33, 1233-1243.
3. **Borrok, D.M.**, Broussard III, W. (2016) Long-term geochemical evaluation of the Coastal Chicot Aquifer, Louisiana, USA. *Journal of Hydrology*, 533, 320-331
4. Szykiewicz A., **Borrok, D.M.** (2016) Isotope variations of dissolved Zn in the Rio Grande watershed, USA: The role of adsorption on Zn isotope composition. *Earth and Planetary Science Letters*, 433, 293-302.

5. **Costigan, K. H.**, and J. E. Gerken. 2016. Channel morphology and flow structure of an abandoned channel under varying stages, *Water Resources Research*, 52, DOI:10.1002/2015WR017601.
6. **Costigan, K.H.**, K.L. Jaeger, C.W. Goss, K. Fritz, and P.C. Goebel. 2016. Understanding controls on flow permanence in intermittent rivers to aid ecological research: Integrating meteorology, geology and land cover. *Ecohydrology*. DOI: 10.1002/eco.1712.
7. Steinman, B.S., Pompeani, D.P., Abbott, M.B., Ortiz, J.D., Stansell, N.D., Finkenbinker, M.S., Mihindukalasarriya, L., **Hillman, A.L.** (2016) Oxygen isotope records of Holocene climate variability in the Pacific Northwest. *Quaternary Science Reviews* 142, 40-60.
8. **Hillman, A.L.**, Abbott, M.B., Yu, J.Q., Steinman, B.A., Bain, D.J. (2016) The Isotopic Response of Lake Chenghai, SW China, to Hydrologic Modification from Human Activity. *The Holocene* 26 (6), 906-916.
9. Feng Chen, **Gary L. Kinsland**, 2016, Study of Channel Morphology and Infill Lithology in the Wilcox Group in Central Louisiana in using Seismic Attribute Analysis, *Gulf Coast Association of Geological Societies Transactions*, Vol. 66, Pages 121-139.
10. Ivy, R. M., and **G. L. Kinsland**, 2016, Regional subsurface investigation of the uppermost Cretaceous of northern Louisiana: *Gulf Coast Association of Geological Societies Transactions*, v. 66, p. 283–305.
11. **Kinsland, G. L.**, and J. W. Snedden, 2016, Comparison of a portion of the K/Pg boundary deposits in two locations: Webb County, Texas, and LaSalle Parish, Louisiana: *Gulf Coast Association of Geological Societies Transactions*, v. 66, p. 789–797.
12. **Kinsland, G. L.**, R. Stewart, L. Chang, D. Temple, and M. King, 2016, High resolution surface-sourced seismic experiment to image Wilcox Group horizons in northern central Louisiana: *Gulf Coast Association of Geological Societies Transactions*, v. 66, p. 799–806.
13. **Poudel, D.D.** 2016. Surface Water Quality Monitoring of an Agricultural Watershed for Nonpoint Source Pollution Control, *Journal of Soil and Water Conservation*, 71(4):310-326.
14. Trahan, MW* and **Schubert, BA.** 2016. “Temperature-induced water stress in high-latitude forests in response to natural and anthropogenic warming.” *Global Change Biology*, 22(2): 782-791, doi: 10.1111/gcb.13121. IF: 8.444
15. Cui, Y* and **Schubert, BA.** 2016. “Quantifying uncertainty of past pCO₂ determined from changes in C₃ plant carbon isotope fractionation.” *Geochimica et Cosmochimica Acta*, 172: 127-138, doi: 10.1016/j.gca.2015.09.032. IF: 4.870.
16. Alam, R, Benson BC, **Visser JM** and Gang DD. 2016. Response of estuarine phytoplankton to nutrient and spatio-temporal pattern of physico-chemical water quality parameters in Little Vermillion Bay, Louisiana. *Ecological Informatics* 32:79-90. Impact Factor: 1.727.
17. White, D.A., and **J.M. Visser.** 2016. Dynamic Mississippi River's temperature, discharge, and sediment load explains longterm biomass trends on delta splays. *Aquatic Botany* 132:5-11. Impact Factor 1.608.
18. **Rui Zhang** and Sergej Fomel, 2017, Time variant wavelet extraction with a local attribute based time-frequency decomposition for seismic inversion, *Interpretation*, 5(1), SC9-SC16.
19. **Rui Zhang**, Kui Zhang and Jude E Alekhue, 2017, Depth domain seismic reflectivity inversion with compressed sensing technique, *Interpretation*, 5(1), T1-T9.

2015

20. Szyrkiewicz A., **Borrok D.M.**, Skrzypek G., Rearick M. Isotopic studies of the Upper and Middle Rio Grande. Part 1 – Importance of sulfide weathering in the riverine sulfate budget. *Chemical Geology*, 411, (2015), 323-335.
21. Szyrkiewicz A., **Borrok D.M.**, Ganjegunte G.K., Skrzypek G., Ma L., Rearick M., Perkins G. Isotopic studies of the Upper and Middle Rio Grande. Part 2 – Salt loads and human impacts in south New Mexico and west Texas. *Chemical Geology*, 411, (2015), 336-350.
22. Thapalia, A., **Borrok, D.M.**, Van Metre, P.C., Wilson, J. Zinc Isotopic Signatures in lake sediment cores from across the United States. *Environmental Science and Technology* 49, (2015), 132-140. [dx.doi.org/10.1021/es5036](https://doi.org/10.1021/es5036).
23. **Costigan, K.H.**, M.D. Daniels, and W.K. Dodds. Fundamental spatial and temporal disconnections in the hydrology of an intermittent prairie headwater fluvial network. *Journal of Hydrology*, (2015), 522:305-316.
24. **Costigan, K.H.**, P.J. Soltesz, and K.L. Jaeger. In-stream large wood in Central Appalachian watersheds: Controls and potential changes to wood recruitment and retention due to infestation of hemlock woolly adelgid. *Earth Surface Processes and Landforms*. (2015).
25. Fencl, J.S., M.E. Mather, **K.H. Costigan**, and M.D. Daniels. How Big of an Effect Do Small Dams Have? Using Geomorphological Footprints to Quantify Spatial Impact of Low-Head Dams and Identify Patterns of Across-Dam Variation. *PLOSOne*. (2015).
26. Perkin, J.S., K.B. Gido, **K.H. Costigan**, M.D. Daniels, and E. Johnson. Fragmentation and drying ratchet down Great Plains stream fish diversity. *Aquatic Conservation: Marine and Freshwater Ecosystems*. (2015), 25(5):639-655.
27. K. Methner, A. Mulch, C. Teyssier, M. Wells, M. Cosca, **R. Gottardi**, A. Gébelin, P. Chamberlain. Eocene and Miocene extension, meteoric fluid infiltration and core complex formation in the Great Basin (Raft River Mountains, Utah). *Tectonics*, (2015), 34.4: 680-693.
28. **R. Gottardi**, C. Teyssier, A. Mulch, J.W. Valley, M.J. Spicuzza, T.W. Vennemann, A. Quilichini, M. Heizler. Strain and permeability gradients traced by stable isotope exchange in the Raft River detachment shear zone, Utah. *Journal of Structural Geology*, (2015), ISSN 0191-8141, <http://dx.doi.org/10.1016/j.jsg.2014.10.005>.
29. **Kinsland, G.L.** and Christoph Borst. Visualization and Interpretation of Geological Data in 3D Virtual Reality Interpretation. Vol. 3, No. 3 (August 2015), pp. 1-8.
30. **Poudel, D.D.** Factors associated with farm-level variation, and farmers' perception and climate change adaptation in smallholder mixed-farming livestock production system in Nepal. *International Journal of Environmental and Sustainable Development*. (2015), 14(3): 231-257.
31. **Richter, C.**, and Ali, J., Philippine Sea Plate Motion history: Eocene-Recent record from ODP Site 1201, central West Philippine Basin. *Earth and Planetary Science Letters*, (2015), 410 (1), 165-173.
32. Hodell, D., Lourens, L., Crowhurst, S., and others (including **Richter, C.**). A reference time scale for Site U1385 (Shackleton Site) on the SW Iberian Margin. *Global and Planetary Change*, (2015), 133, 49-64.
33. **Richter, C.**, and Ali, J. Philippine Sea Plate Motion history: Eocene-Recent record from

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35. **Schubert B.A.**, and Jahren AH. (invited review). "Seasonal temperature and precipitation recorded in the intra-annual oxygen isotope pattern of meteoric water and tree-ring cellulose." *Quaternary Science Reviews*, (2015), 125: 1-14, doi: 10.1016/j.quascirev.2015.07.024.
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37. White, D.A., and **J.M. Visser**. Dynamic Mississippi River's temperature, discharge, and sediment load explains long-term biomass trends on delta splays. *Aquatic Botany*, 2015.
38. **Visser, J. M.**, and J. K. Peterson. The effects of flooding duration and salinity on three common upper estuary plants. *Wetlands*, (2015), 35:625-631 Impact factor:1.444.
39. Shangxu Wang, Sanyi Yuan, Ming Ma, **R. Zhang**, Chunmei Luo. Wavelet phase estimation using ant colony optimization algorithm: *Journal of Applied Geophysics*, 2015, 122, 159-266. Impact factor 1.5.
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42. **Zhang, R.**, Donald Vasco and Thomas M. Daley. Study of seismic diffraction wave caused by a fracture zone at InSalah Carbon dioxide storage project: *International Journal of Greenhouse Gas Control*, (2015), 52, 75-86. Impact factor 3.946.

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99. Borst, Christoph W. and **G.L. Kinsland**. Image of 3D Lidar Data Near the Lafayette Airport. *Wired Science*, (2011), <http://www.wired.com/wiredscience/2011/04/lasers-map-spiders/#more-56987>.
100. **R. Gottardi**, C. Teyssier, A. Mulch, T.W. Vennemann, and M.L. Wells. Preservation of an extreme transient geotherm in the Raft River detachment shear zone. *Geology*, July 2011, doi:10.1130/G31834.1.
101. Marynowski, L, Rakociński, M, Borcuch, E, Kremer, B, **Schubert, B.A.**, Jahren, AH. “Molecular and petrographic indicators of redox conditions and bacterial communities after the F/F mass extinction (Kowala, Holy Cross Mountains, Poland).” *Palaeogeography, Palaeoclimatology, Palaeoecology*, **306**, 2011, 1-14.
102. **Schubert, B.A.** and Jahren, AH. “Quantifying seasonal precipitation using high-resolution carbon isotope analyses in evergreen wood.” *Geochimica et Cosmochimica Acta*, **75**(22), (2011), 7291-7303.
103. **Schubert, B.A.** and Jahren, AH. “Fertilization trajectory of the root crop *Raphanus*

- sativus* across atmospheric $p\text{CO}_2$ estimates of the next 300 years.” *Agriculture, Ecosystems, and Environment*, **140**(1-2), (2011), 174-181.
104. Lowenstein, TK, **Schubert, B.A.**, and Timofeeff, MN. “Microbial communities in fluid inclusions and long-term survival in halite.” *GSA Today*, **21**(1), (2011), 4-9.

Conference Proceedings, Abstracts

2016

1. Barato, F., Broussard III, W.P., **Borrok, D.M.**, CONLIN, D. (2016) Geospatial framework for cataloguing and analyzing groundwater withdraw information. Tenth Annual Louisiana Groundwater, Surface Water & Water Resources Symposium, Baton Rouge, Louisiana
2. Barato, F., Broussard III, W.P., **Borrok, D.M.**, CONLIN, D. (2016) Geospatial framework for cataloguing and analyzing groundwater withdraw information. Tenth Annual Louisiana Groundwater, Surface Water & Water Resources Symposium, Baton Rouge, Louisiana
3. Eldardiry, H., Habib, E., **Borrok, D.M.** (2016) Assessment of Water Stresses in Southwest Louisiana: Effects of Uncertainties in Water Resources Availability. Tenth Annual Louisiana Groundwater, Surface Water & Water Resources Symposium, Baton Rouge, Louisiana.
4. **Borrok, D.M.** (2016) A surface water management framework to counterbalance groundwater withdrawals in wetter regions of the U.S. National Science Foundation WSC PI meeting, Arlington, VA., March 9-11, 2016.
5. Shane, T., **Borrok, D.M.**, Lock, B.E. (2016) Geochemical analysis of parasequences within the productive middle member of the Eagle Ford formation at Lozier Canyon near Del Rio, Texas. Gulf Coast Association of Geological Societies (GCAGS), Corpus Christi, TX.
6. Lipman, H., Pfau, K., **Borrok, D.M.** (2016) A multiproxy analysis of the Marcellus Shale in Northeastern Pennsylvania. GSA South Central, 50th annual meeting, Baton Rouge, LA.
7. Shane, T., **Borrok, D.M.**, Lock, B.E. (2016) Geochemical analysis of parasequences within the productive middle member of the Eagle Ford Formation at Lozier Canyon near Del Rio, Texas. GSA South Central, 50th annual meeting, Baton Rouge, LA.
8. Vanhazebroek E., **Borrok, D.M** (2016) Pre- and post-pyrolysis leaching of Eagle Ford Shale Samples to Better Evaluate the Inorganic Geochemistry of Kerogen. GSA South Central, 50th annual meeting, Baton Rouge, LA.
9. Conlin, D., **Gottardi, R.**, Morra, G., Spezia, K., Numerical modeling of fluid flow and heat transfers in fault systems, 2016 South Central Geological Society of America Meeting, Baton Rouge (LA).
10. Adam, L., **Gottardi, R.**, Depositional history and source rock characterization at teapot dome (WY), 2016 South Central Geological Society of America Meeting, Baton Rouge (LA).
11. Schaper, M., **Gottardi, R.**, Barnes, J. Fluid-rock interaction in the Picacho Peak detachment shear zone (AZ), 2016 Geological Society of America Annual Fall Meeting, Denver (CO).

12. Conlin, D., **Gottardi, R.**, Morra, G., Numerical modeling of fluid flow and heat transfers in porous media: implication for the hydrology of midcrustal shear zones, 2016 Geological Society of America Annual Fall Meeting, Denver (CO).
13. **Gottardi, R.** Thermomechanics of a detachment shear zone, Picacho Peak, AZ, 2016 GSA Structural Geology and Tectonics Forum, Sonoma.
14. **Hillman, A.L.**, Abbott, M.B., Werne, J.P., Arkush, E., Thompson, L.G., Ferland, T., Holmes, E., Puhnaty, C., Woods, A.S., (2016) Late Holocene Lake Level Fluctuations at Laguna Arapa, Peru and Connections to Human Demography. American Geophysical Union National Meeting.
15. Morris, J., Stoner, J.S., Reilly, B.T., Hatfield, R.G., Konyndyk, D., Abbott, M.B., Finkenbinder, M.S., **Hillman, A.L.**, (2016) Lake Sediment Particle Size Analysis for Holocene Paleoenvironmental Study of Steens Mountain, Eastern Oregon. American Geophysical Union National Meeting.
16. Rodbell, D.T., Abbott, M.B., Weidhass, N.I., Hatfield, R.G., Woods, A.S., **Hillman, A.L.**, Tapia, P.M., Chen, C.Y., McGee, D., Stoner, J.S., Finkenbinder, M.S., Hatfield, R.G., Delgado, G.M., (2016) Initial Results from the Deep Drilling of Lake Junin, Peru. American Geophysical Union National Meeting.
17. Weidhass, N.I., Woods, A.S., Abbott, M.B., Rodbell, D.T., Larsen, D.J., **Hillman, A.L.**, Finkenbinder, M.S., Hatfield, R.G., Delgado, G.M., Tapia, P. (2016) Controls on the Composition and Distribution of Late Pleistocene and Holocene Sediment in Lake Junin, Peru. Northeast Geological Society of America Meeting.
18. Dahal, P., Van Asbrouck, J., Wu, F., Groopman, J.D., **Poudel, D.**, Kunusoth, K., and Bradford, K.J. 2016. Dry Chain is a Social Preventive Intervention Tool for Liver Cancer by Minimizing Aflatoxins in Dry Foods, Annual Conference of American Institute for Cancer Research, Washington DC, Nov. 14-16, 2016. (Poster).
19. **Poudel, D.D.** 2016. Water Quality Sampling and Assessment in a Coastal Agricultural Watershed in Louisiana, USA, ASA-CSSA-SSSA Meeting, Nov. 6-9, 2016, Phoenix, AZ.
20. **Poudel, D.D.** 2016. Water Quality Sampling and Assessment for Bayou Chene in Louisiana, USA, 71st SWCS International Annual Conference, July 24-27, 2016, Louisville, Kentucky.
21. **Poudel, D.D.** 2016. Rebuilding coupled with sustainable land use, food security, and agri-business for community resiliency in the Gorkha Earthquake devastated region in Nepal, International Workshop on Gorkha Earthquake: Lesson Learned and Future Road Map for Safer Community and Sustainable Development, 24-25 April, 2016, Kathmandu, Nepal, Department of Mines and Geology (DMG), Ministry of Industry, Government of Nepal, p.50
22. Terri Bannister, **Durga D. Poudel**, and Timothy W. Duex. 2016. Mapping Geohazards in the Churia Region of Nepal: An Application of Remote Sensing and Geographic Information Systems to Quantify Change, 2016 GSA South-Central Section Meeting, Baton Rouge, Louisiana, 21-22 March, 2016.
23. **Schubert, BA** and Cui, Y*. 2016. "Atmospheric carbon dioxide persisted at near modern levels before and after the PETM," American Geophysical Union Fall Meeting (oral, invited Union talk).

24. **Schubert, BA** and Jahren, AH. 2016. "Combined and isolated effects of pCO₂ and soil water content on carbon isotope discrimination during C₃ photosynthesis," American Geophysical Union Fall Meeting (oral).
25. Cui, Y* and **Schubert, BA**, 2016. "High-resolution pCO₂ reconstruction across the early Cenozoic greenhouse and late Cenozoic icehouse climates," American Geophysical Union Fall Meeting (poster).
26. Grein, KS* and **Schubert, BA**. 2016. "Climate reconstruction in southern Louisiana using carbon isotope measurements of tree rings," GSA South Central, Baton Rouge, LA (poster).
27. Cui, Y* and **Schubert, BA**. 2016. "High-resolution atmospheric pCO₂ reconstruction across the Paleogene using marine and terrestrial $\delta^{13}\text{C}$ records," Ocean Sciences Meeting, New Orleans, LA (oral).
28. Thomas M Daley, Curtis M Oldenburg, Andrea Borgia, **Rui Zhang**, Christine Doughty, Yoojin Jung, Bilgin Altundas, Nikita Chugunov and T S Ramakrishnan, 2016, Enhanced characterization of faults and fractures at EGS sites by CO₂ injection coupled with active seismic monitoring, pressure-transient testing, and well logging, AGU fall meeting H130-05.
29. Warren Wood, Taylor Runyan and **Rui Zhang**, 2016, A machine learning approach to quantifying geologic similarities between sites of gas hydrate accumulation, AGU fall meeting OS51B.
30. **Rui Zhang**, Kui Zhang and Jude E. Alekhue, 2016, Depth domain seismic reflectivity inversion with compressed sensing technique, SEG 86th Annual meeting Dallas.
31. **Rui Zhang** and Sergey Fomel, 2016, Application of predictive painting to well-log data interpolation and seismic inversion, SEG 86th Annual meeting Dallas.
32. **Rui Zhang** and Sergey Fomel, 2016, Time-variant wavelet extraction with spectral decomposition for seismic inversion, SEG 86th Annual meeting Dallas.
33. Parvaneh Karimi, Sergey Fomel and **Rui Zhang** , 2016, Time-lapse image registration using the stratigraphic-coordinate system, SEG 86th Annual meeting Dallas. Curtis M. Oldenburg, Thomas M. Daley, Andrea Borgia, **Rui Zhang**, Christine Doughty, T.S. Ramakrishnan, Bilgin Altundas, Nikita Chugunov, 2016, Preliminary simulations of carbon dioxide injection and geophysical monitoring to improve imaging and characterization of faults and fractures at EGS sites, Stanford Geothermal Workshop 41 Annual Meeting.
34. Landreneau, B. and **Visser J.**, 2016. The effect of flooding duration and height on *Spartina patens*. Poster presented at Gulf Estuarine Research Society, Society of Wetland Scientists-South Central and South Atlantic Chapters, Fall Meeting, Pensacola Beach, FL, November 3-5.
35. Hester MW, Sloey TM., Willis JM, and **Visser JM**. 2016. Understanding Coastal Wetland Plant Responses to Flooding. State of the Coast Conference, New Orleans, LA June 1-3.
36. **Visser JM**. 2016 Existing Diversion Impacts on Flooding and Plant Responses. State of the Coast Conference, New Orleans, LA June 1-3.
37. Duke-Sylvester SM, **Visser JM**, and Baustian M. 2016. Modeling the Effect of Flooding on Wetland Vegetation, State of the Coast Conference, New Orleans, LA June 1-3.
38. Meselhe E, Baustian M, Jung H, Sadid K, Xing F, Khadka A, Allison M, Duke-Sylvester S, **Visser J**, Smith J, Jueken M, and Van Maren B. 2016. Mississippi River

Hydrodynamic and Delta Management Study (MRHDM): Basin-Wide Delft3D Model Setup, Validation, and Application. State of the Coast Conference, New Orleans, LA June 1-3.

39. White E, Meselhe E, T. Brown S, Couvillion B, Dong Z, Green M, Duke-Sylvester S, McCorquodale A, Rodrigue M, Schindler J, Thomson G, **Visser J**, Wang J, Habib E, and Reed D. 2016. Integrated Compartment Model (ICM) Application: Scenarios, Uncertainties and Project Evaluations. State of the Coast Conference, New Orleans, LA June 1-3.
40. Habib E, Deshotel M, Bodin M, Miller R, Meselhe E, Roth B, Williams D and **Visser J**. 2016 Unlocking the Educational Value of Louisiana Coastal Restoration: Development of Web-Based Active-Learning Modules for Undergraduate Education. State of the Coast Conference, New Orleans, LA June 1-3.

2015

41. SYVERSON, D., Luhmann, A., Tan, C., **Borrook, D.M.**, Ding, K., Seyfried, W. (2015). Fe and Cu isotope fractionation between chalcopyrite and dissolved metal species during hydrothermal recrystallization: An experimental study at 350°C and 500 bars. AGU Annual Fall Meeting, San Francisco, CA.
42. **Borrook, D.M.**, Broussard, W.P., Jennings, J.E., Cravens Barth, T. (2015). Evolution of salinity in the coastal Chicot aquifer systems, Louisiana, USA. Geological Society of America Annual Meeting. Baltimore, MD. November 1-4, 2015.
43. **Borrook, D.M.**, Habib, E., Broussard, W.P., DeRouen, J., **Poudel, D.**, Zhang, N. (2015). Surface water use to counterbalance groundwater withdrawals in Southwest Louisiana. Ninth Annual Louisiana Groundwater, Water Resources & Environmental Symposia. Baton Rouge Geological Society, Louisiana Geological Survey & Louisiana Water Resources Research Institute. Baton Rouge, LA. 16 April 2015.
44. Broussard III, WP, Habib, E., **Borrook, D.M.**, Smith, K., DeRouen, J. (2015). GIScience as a great integrator in transdisciplinary research and educational models for water sustainability. Association of American Geographers 2015 Annual Meeting. Chicago, IL.
45. Broussard III, WP, Chen, J., Santos, F.B., Habib, E., **Borrook, D.M.** (2015). Integrating Social and Environmental Data in a Georeferenced Surface Water Use-Availability Model. Ninth Annual Louisiana Groundwater, Water Resources & Environmental Symposia. Baton Rouge Geological Society, Louisiana Geological Survey & Louisiana Water Resources Research Institute. Baton Rouge, LA. 16 April 2015.
46. **Borrook, D.M.**, Geyer, N., Vanhazebroek, E. (2015). Inorganic and organic geochemistry of petroleum source rocks. Geological Society of America South-Central Meeting, March 19-20, Stillwater, Oklahoma.
47. Habib, E., Sumi, S., Tamanna M., **Borrook, D.M.** (2015). How representative are climate model outputs of regional precipitation characteristics? Poster presentation at the 2015 Annual meeting of Water Sustainability and Climate NSF Grantees, Washington DC, February 9-11.
48. **Borrook, D.M.** (2015). A surface water management framework to counterbalance groundwater withdrawals in wetter regions of the U.S. National Science Foundation WSC PI meeting, Arlington, VA.
49. **Costigan, K.H.**, C.W. Goss, K.L. Jaeger, and P.C. Goebel. Comparison of wet/dry mapping and electrical resistivity sensors to characterize patterns of intermittency, American Geophysical Union, San Francisco, CA, December 2015.

50. *Wellemeier, C.J., J.S. Perkin, M.L. Jameson, and **K.H. Costigan**. Synthesizing multiscale processes regulating persistence of Arkansas Darter.
51. S. L. Mason, **R. Gottardi**. Structural Characterization of the Eagle Ford Formation, Val Verde County, Texas. 2015 GCAGS, Houston, Texas.
52. S. M. Hamilton, **R. Gottardi**. An investigation of the mass balance of Oil and Gas produced versus estimated reserves remaining within the A.W.P. Field, McMullen County, Texas. 2015 AAPG West Coast Student Expo.
53. S. L. Mason, **R. Gottardi**. Structural Characterization of the Eagle Ford Formation, Val Verde County, Texas, 2015 LAGCOE, Lafayette, LA.
54. S. M. Hamilton, **R. Gottardi**. An investigation of the mass balance of Oil and Gas produced versus estimated reserves remaining within the A.W.P. Field, McMullen County, Texas, 2015 LAGCOE, Lafayette, LA.
55. M. T. Berkland, **R. Gottardi**. Strain analysis across a detachment shear zone, Picacho Peak, AZ. 2015 Baltimore GSA Fall Meeting.
56. K. Spezia, **R. Gottardi**, G. Morra. Numerical modeling of fluid flow and heat transfers in porous media: Implications for the hydrology of mid-crustal shear zones. 2015 GSA Baltimore Fall Meeting.
57. D. Sutton, **R. Gottardi**, **G.L. Kinsland**. Structural and Geophysical analysis of Roatan Island Honduras, Western Caribbean. 2015 Baltimore GSA Fall Meeting
58. Conference Presentation, PowerPoint Online: **Kinsland, G. L.**, (2015). Thoughts on the Relationship of Structures of the Northern Margin of the Gulf of Mexico Basin to Early Rifting of the Basin, abstract in proceedings: Geological Society of America, South Central Section Meeting, PowerPoint available GSA SC meeting online.
59. **Poudel, D.D.** and T.W. Duex. (2015). Declining water resources and environmental degradation: A case of the Thulokhola watershed in the Nuwakot district of Nepal, XXIII International Grassland Congress, IGC 2015, November 20-24, 2015, New Delhi, India.
60. **Poudel, D.D.** and P. Clerks. (2015). Water Quality Monitoring in Bayou Chene and Lacassine Bayou in Louisiana. 70th SWCS International Annual Conference, Putting Science into Practice, July 26-29, 2015, Sheraton Four Seasons Hotel, Greensboro, NC. Available at http://www.swcs.org/documents/filelibrary/15ac/Abstract_Book_FINAL_31A269C46D632.pdf, page 132.
61. **Poudel, D.D.** American Geophysical Union's Fall Meeting, San Francisco, 14-18 December, 2015.
62. **Poudel, D.D.** and T.W. Duex. Declining water resources and environmental degradation: A case of the Thulokhola watershed in the Nuwakot district of Nepal (Oral) 23rd International Grassland Congress (XXIII International Grassland Congress), IGC 2015, November 20-24, 2015, New Delhi, India.
63. **Poudel, D.D.** Establishing Agro-Industrial Information System for Rebuilding Earthquake Devastated Rural Nepal (Poster). GSA 2015, Baltimore, Maryland, USA. November 1-4, 2015.
64. **Poudel, D.D.** and Paul Klerks. Water Quality Monitoring in Bayou Chene and Lacassine Bayou in Louisiana (Oral). 70th SWCS International Annual Conference, Putting Science into Practice, July 26-29, 2015, Sheraton Four Seasons Hotel, Greensboro, NC.
65. **Poudel, D.D.** Global Soil Security Conference, May 19-21, 2015, College Station, Texas A&M, International Union of Soil Sciences.

66. **Poudel, D.D.** Engaged Student Learning: An Afternoon with Dr. Vincent Tinto, Tuesday, March 24, 2015, University of Louisiana at Lafayette, Louisiana, USA.
67. **Poudel, D.D.** International Symposium on Glaciology in High-Mountain Asia, March 1-6, 2015, Kathmandu, Nepal. International Glaciological Society.
68. Elhelou, O.* and **Richter, C.** (2015). Magnetic susceptibility mapping of fly ash in soil samples near a coal-burning power plant in Pointe Coupee Parish, Louisiana. Fall Meeting, AGU, San Francisco, California, 14-18 Dec., B11D-0476.
69. **Richter, C.**, Adesiyun, O.*, Acton, G., Sidorovskaia, N., Sierro, F., Xuan, C., and Verosub, K. (2015). High-resolution magnetic properties and cyclicity of controurites from IODP Site U1389 West Iberian Margin). Fall Meeting, AGU, San Francisco, California, 14-18 Dec., GP51A-1313.
70. Xuan, C., **Richter, C.**, Acton, G., Stoner, J., Li, B., Hodell, D., Ducassou, E., MacLachlan, S., and Voelker, A. (2015). Millennial scale geomagnetic and environmental change in the West Iberian Margin during late Quaternary. Fall Meeting, AGU, San Francisco, California, 14-18 Dec., GP51A-1312.
71. Cui, Y and **Schubert, B.A.** (2015). "Atmospheric pCO₂ reconstructed across the Early Eocene Hyperthermals." American Geophysical Union Fall Meeting.
72. **Schubert, B.A.**, Jahren, AH, and Davydov, SP. 2015. "Wet winters in the eastern Siberia Arctic during the Miocene." American Geophysical Union Fall Meeting.
73. **Visser, J.M.**, Green M, Belhadjali K, and Reed D. Using Science in Coastal Restoration Planning: 20 Years of Experience. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
74. Meselhe E, White E, Brown S, Couvillion B, Dong Z, Green M, Duke-Sylvester S, McCorquodale A, Rodrigue M, Schindler J, Thomson G, **Visser J.M.**, and Wang J. Coastal ecosystem integrated compartment model (ICM): Modeling framework. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
75. Duke-Sylvester S, **Visser J.M.**, and White E. LAVegMod: Modeling Long-term Coastal Vegetation Change at the Landscape Scale. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
76. White E, Meselhe E, White E, Brown S, Couvillion B, Dong Z, Green M, Habib E, Duke-Sylvester S, McCorquodale A, Reed D, Schindler J, Thomson G, and **Visser, J.M.** Integrated Compartment Model (ICM) application: Scenarios, uncertainties and project evaluations. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
77. Jarrell E, Meselhe E, Baustian M, Jung H, Allison M, Reed D, Pahl J, Duke-Sylvester S, **Visser, J.M.**, Smits J, Jueken M, and VanMaren B. Predictive Modeling for a Proposed Network of Diversion. Projects across the South Louisiana Landscape. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
78. Couvillion B, Hartley S, **Visser, J.M.**, Beck H, and Maass A. Wetland vegetation community type change in coastal Louisiana from 1973-2013. Coastal Estuarine Research Federation 23rd Biennial Conference, Portland OR, November 2015.
79. Meselhe E, White E, Brown S, Couvillion B, Dong Z, Green M, Duke-Sylvester S, McCorquodale A, Rodrigue M, Schindler J, Thomson G, **Visser, J.M.**, and Wang J. Coastal ecosystem integrated compartment model (ICM): Modeling framework. AGU Fall Meeting, San Francisco CA, October 2015.

80. Andrea Borgia, Curtis M. Oldenburg, **R. Zhang** and T. S. Ramakrishnan. Lawrence Berkeley National Laboratory. TOUGH Symposium 2015.
81. **R. Zhang**, Bo Zhang, (2015). Seismic reflectivity attributes, SEG 835nd Annual meeting New Orleans.
82. **R. Zhang**, Donald Wyman Vasco, Thomas M. Daley and William Harbert. (2015). Characterization of a fracture zone using seismic attributes at the In Salah CO2 storage project, SEG 835nd Annual meeting New Orleans.
83. **Zhang, R.**, Thomas Daley, and Donald Vasco. (2015). Study of seismic diffraction wave caused by a fracture zone at In Salah carbon dioxide storage project. Engineering Mechanism Institute Conference 2015 Stanford University.

2014

84. Saber, M., Habib, E., **Borrok, D.M.** (2014). Monitoring of groundwater quality and quantity using GRACE satellite data in Louisiana, USA. AWRA Annual Water Resources Conference, Tysons Corner, VA.
85. Syverson, D., Tutolo, B., **Borrok, D.M.**, Seyfried, W. (2014). Mass transfer of Fe during the serpentinization of olivine by SiO₂ rich fluid at 300°C, 500 bars: Perspectives from mineral dissolution/precipitation rates and Fe isotope systematics. AGU Annual Fall Meeting, San Francisco, CA.
86. Geyer, N.D., **Borrok, D.M.** (2014). Relationship of inorganic and organic geochemistry in petroleum source rocks. Geological Society of America Annual Meeting, October 19-22, Vancouver, British Columbia.
87. Geyer, N.D., **Borrok, D.M.** (2014). Inorganic geochemistry of shale source rocks. Annual Convention of the Gulf Coast Association of Geological Societies, October 5-7, Lafayette, LA.
88. Monlezun C.J., Broussard III, W.P., **Borrok, D.M.** (2014). Integrated geospatial and chemical analysis of storm water drainage. Annual Convention of the Gulf Coast Association of Geological Societies, October 5-7, Lafayette, LA.
89. **Duex, T.W.**, Martin, J.E., **Borrok, D. M.** (2014). Merger of the University of Louisiana Geology Museum and the Lafayette Science Museum and potential use as an educational tool. Annual Convention of the Gulf Coast Association of Geological Societies, October 5-7, Lafayette, LA.
90. Strong, M. A., and **G.L. Kinsland.** (2014). Chicxulub impact tsunami deposits at the K–Pg boundary in northern Louisiana? Gulf Coast Association of Geological Societies Transactions, Vol. **64**, 735.
91. Chaisson, C., and **G.L. Kinsland.** (2014). Investigation of the lower Wilcox Group for coal distribution in parts of Avoyelles, Rapides, Grant, La Salle, Catahoula, and Concordia parishes, Louisiana: Gulf Coast Association of Geological Societies Transactions, Vol. **64**, 511–517.
92. **Kinsland, G.L.** and Christoph Borst. (2014). Visualization of Petroleum Well-logs from Northern Louisiana in 3D Immersive Virtual Reality, in proceedings: Interpretation Visualization in the Petroleum Industry, AAPG Hedberg Research Conference, June 1 – 5, Houston, Texas, USA.
93. **Poudel, D.D.** (2014). The Mississippi River Basin Initiative (MRBI) Watershed Water Quality Monitoring in Bayou Chene and Lacassine Bayou in Louisiana, ASA, CSSA, & SSSA International Annual Meeting, November 2-5, Long Beach, California.
94. Moore, K., **D.D. Poudel, T. Duex.** Hydrogeology and water quality in Bayou Chene and

- Lacassine Bayou in southwestern Louisiana, 64th Annual Convention of the Gulf Coast Association of Geological Societies (GCAGS) and Gulf Coast Section of SEPM, October 5-7, 2014, Lafayette, Louisiana, USA.
95. Comiskey, Sean, **D.D. Poudel**, **T. Duex**, and **C. Richter**. Variation in Instream Water Quality and Magnetic Susceptibility across the Coulee Baton Microwatershed in Southwestern Louisiana, 64th Annual Convention of the Gulf Coast Association of Geological Societies (GCAGS) and Gulf Coast Section of SEPM, October 5-7, 2014, Lafayette, Louisiana, USA.
 96. **Poudel, D.D.** (2014). Reducing Nutrients, Fecal Coliform, and Sediment Concentrations in the Lower Mississippi River Sub-Basin. 69th SWCS International Annual Conference, Making Waves in Conservation, July 27-30, 2014, Westin Lombard Hotel 70 Yorktown Center, Lombard, Illinois.
 97. **Poudel, D.D.** (2014). Improving Surface Water Quality of an Agricultural Watershed using Planned Intervention Microwatershed Approach. 7th International Conference on Environmental Science and Technology, June 9-13, Crowne Plaza Hotel near Reliant Center, Houston, Texas, USA,
 98. **Poudel, D.D.** (2014). A Quick Assessment of Soil Conditions through Focus Group Discussions, Participatory Rural Appraisals, and Soil Sampling in the Mid-Hills Region of Nepal, Soil Science Society of America (SSSA) Ecosystem Services Conference (Specialized Conference), Soil's Role in Restoring Ecosystem Services, March 6-9, 2014, Sacramento, California. Abstract available at <https://scisoc.confex.com/crops/2014SES/webprogram/Paper84503.html>
 99. **Richter, C.**, Horton, L.*, Acton, G., Sidorovskaia, N., Sierro, F., Xuan, C., and Verosub, K. (2014) Relative Geomagnetic Paleointensity, Environmental Magnetism, and Cyclicity of Contourites from the West Iberian Margin (IODP Site U1389). Fall Meeting, AGU, San Francisco, California, 15-19 Dec., GP23B-3686.
 100. Stiles, L.*, **Richter, C.**, and Schramm, W. (2014). Magnetic susceptibility of soils in Baton Rouge, Louisiana: A proxy for the anthropogenic impact on the environment. Gulf Coast Association of Geological Societies Annual Meeting (Lafayette, 10/7/2014).
 101. St-Onge, G., St-Onge, M.-P., Simon, Q., Hillaire-Marcel, C., **Richter, C.** (2014). Holocene and Late Pleistocene paleomagnetic records from Baffin Bay. Baffin Bay Workshop, GEOTOP, Université du Québec à Montréal, Montréal, Canada, January 22.
 102. Flores, J., Balestra, B., Acton, G., Alvarez-Zarikian, C., Grunert, P., Hernández-Molina, J., Hodell, D, Li, B., **Richter, C.**, Sanchez Goñi, M., Sierro, F., Singh, A., Stow, D., Voelker, A., and Xuan, C. (2014). Pleistocene calcareous nannofossil biostratigraphy and biochronology: Preliminary results from the IODP Site U1385 (Exp 339), the Shackleton Site. EGU General Assembly Conference, 16: 8993.
 103. **Richter, C.**, Horton, L.*, Acton, G., Xuan, C., and Verosub, K. (2014). High-resolution Environmental Magnetic Properties and Relative Geomagnetic Paleointensity of Contourites from the West Iberian Margin (Site U1389). IODP Expedition 339 2nd post cruise meeting, Tarifa, Spain (June 1-6, 2014).

104. Balestra, B., Flores, J.-A., Hodell, D., Acton, G., **Richter, C.**, and Xuan, C. (2014) Pleistocene calcareous nannofossil biostratigraphy and biochronology at the IODP Site U1385 (Exp 339). IODP Expedition 339 2nd post cruise meeting, Tarifa, Spain (June 1-6, 2014).
105. **Schubert, B.A.** and Jahren, AH. (2014). "Reconstructing seasonal climate from high-resolution carbon and oxygen isotope measurements across tree rings," American Geophysical Union Fall Meeting (oral, invited).
106. **Schubert, B.A.** and Jahren, AH. (2014). "Interpreting terrestrial organic carbon isotope records across natural and anthropogenic pCO₂ change." American Geophysical Union Fall Meeting (oral, invited).
107. **Schubert, B.A.** and Jahren, AH. (2014). "Seasonal temperature and precipitation amount recorded in monthly oxygen isotope measurements of meteoric water." Geological Society of America, Vancouver, BC, Canada (oral, invited).
108. **Schubert, B.A.** and Jahren, AH. 2014. "Increased carbon isotope fractionation by terrestrial plants following the Last Glacial Maximum driven by an increase in atmospheric pCO₂." Geological Society of America, Vancouver, BC, Canada (oral).
109. Jahren, AH and **Schubert, B.A.** (2014). "Reconstruction of paleo-pCO₂ based on carbon isotopic discrimination during photosynthesis." Goldschmidt (oral).
110. **Schubert, B.A.** and Jahren, AH. (2014). "The influence of atmospheric carbon dioxide concentration on the carbon isotope composition of plant tissues." Goldschmidt (invited).
111. **Schubert, B.A.** and Jahren, AH. (2014). "A unified interpretation of carbon and oxygen isotope records from tree rings: A quantitative reflection of seasonality." Goldschmidt (invited).
112. **Schubert, B.A.** and Jahren, AH. (2014). "Comparison between modeled, measured, and predicted $\delta^{13}\text{C}$ and pCO₂ values from terrestrial sediments." Department of Energy, Geosciences Research Program, Basic Energy Sciences (poster).
113. **Schubert, B.A.** and Jahren, AH. (2014). "Reconstruction of atmospheric carbon dioxide levels during carbon isotope excursion events." Ocean Sciences Meeting (poster).
114. **Visser J.M.**, A. Pasch, and C. E. Sasser. (2014). Changes in distribution of common plant species in coastal Louisiana: 1997- 2013. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
115. Broussard, W. P., and **J.M. Visser**. (2014). Redefining salinity regimes for wetland vegetation along the Louisiana coast. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
116. Duke-Sylvester, S. M., **J.M. Visser**, and W. P. Broussard. (2014). Modeling Louisiana's coast plant communities. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
117. **Visser J.M.**, A. Pasch, and C. E. Sasser. (2014). Changes in distribution of common plant species in coastal Louisiana: 1997- 2013. 30th Annual Louisiana Remote Sensing and GIS Workshop, May 13-14, 2014, New Orleans, LA.
118. **Visser J.M.**, and A. Pasch. 2014. Changes in plant species distributions along the Louisiana coast: 1997- 2013. Joint Aquatic Sciences meeting, May 18-23, Portland, OR.

119. Sasser, C.E., **Visser, J.M.**, Mouton, E., Linscombe, J., and Hartley, S.B. (2014). Vegetation types in coastal Louisiana in 2013: State of the Coast Conference March 18-20, 2014, New Orleans, LA.
120. Wood, B, Sharp, L. E., and **Visser, J.M.** (2014). Development for a vegetative volume index for the coastwide reference monitoring system- wetlands. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
121. Bodin, M., Habib E., Meselhe E., **Visser, J.M.** and Roth B. (2014). The 2012 Coastal Master Plan as a vehicle for improving undergraduate education in engineering hydrology and coastal sciences. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
122. Pasch, **J.M. Visser**, and W.P. Broussard. (2014). Twenty Years of Change in Louisiana Coastal Vegetation. 30th Annual Louisiana Remote Sensing and GIS Workshop, May 13-14, 2014, New Orleans, LA.
123. Sasser, C.E., **Visser, J.M.**, Mouton, E., Linscombe, J., and Hartley, S.B. (2014). Vegetation types in coastal Louisiana in 2013: 30th Annual Louisiana Remote Sensing and GIS Workshop, May 13-14, 2014, New Orleans
124. SY Yuan, JZ Liu, **R. Zhang**, N Tian, SX Wang, 2015, Seismic Deconvolution via Total Variation Regularization, 76th EAGE Conference and Exhibition 2014.
<http://www.earthdoc.org/publication/publicationdetails/?publication=76463>

2013

125. Yamaoka, K., **Borrok, D.M.**, Usul, A., Kawahata, H. (2013). Iron isotopic composition of submarine hydrogenetic, diagenetic, and hydrothermal ferromanganese deposits. Goldschmidt. Florence, Italy.
126. **Borrok, D.M.**, Thapalia, A (2013). Anthropogenic fractionation of zinc isotopes. Goldschmidt. Florence, Italy. Keynote.
127. **Borrok, D.M.**, Engle, M.A. The evolution of salinity in the Rio Grande and its implications for Water Sustainability. South Central GSA 47th Annual Meeting. 2013.
128. **R. Gottardi**, C. Teyssier. Thermomechanics of a metamorphic core complex: Raft River Mountains (MW Utah). Denver GSA Annual meeting, 2013.
129. **Kinsland, G.L.** (2013). Coal Seam/Bed Methane in Northern Louisiana: Investigations at the University of Louisiana at Lafayette, in Proceedings: Unconventional Resources Technology Conference (URTeC) in Denver, Colorado, 12-14 August 2013.
130. **Poudel, D.D.**, R.P. Thakur, **T. Duex, G. Blakewood, A. Singh, A. DeRamus**, B. Chapagain, K. Acharya, S. Adhikari, R.B. Gramling, and N. Sharma. (2013). Adapting livestock production systems to climate change in Nepal: Challenges and opportunities, pp. 1362-1367, In: D.L. Michalk, G.D. Miller, W.B. Badgery, and K.M. Broadfoot (Editors), 2013 Proceedings of the 22nd International Grassland Congress, 15-19 September, 2013, Sydney, Australia, New South Wales Department of Primary Industry, Kite St., Orange New South Wales, Australia.
131. **Schubert, B.A.** and Jahren, AH. (2013). "High-resolution oxygen isotope profiles in tree-rings and how to interpret them," American Geophysical Union Fall Meeting.
132. Jahren, AH and **Schubert, B.A.** (2013). "Reconstruction of pCO₂ levels from carbon isotopes in terrestrial organic matter." American Geophysical Union Fall Meeting.
133. Jahren, AH and **Schubert, B.A.** (2013). "Carbon stable isotope fractionation during C₃ photosynthesis and its use in probing the terrestrial rock record." Department of Energy, Geosciences Research Program, Basic Energy Sciences.

134. **Visser, J.M.** and B. Soukahn. (2013). Salinity and fertilization effect on growth and biomass of *Typha domingensis*. 22nd Biennial Conference of the Coastal Estuarine Research Federation, San Diego, CA.
135. White, D. A.; **Visser, J.M.** (2013). Effects of the Mississippi river water on wetland plant ecology within its bird-foot delta over a 2.5 decade study period. ASLO 2013 Aquatic Sciences Meeting, New Orleans, LA.

2012

136. Szyrkiewicz, A. **Borrok, D.M.**, Vaniman, D., Goff, F. (2012). Hydrological sulfur cycling in the volcanic complex of Valles Caldera – geochemical and astrobiological implications for Mars. AGU Fall meeting.
137. Kafantaris, F-C., **Borrok, D.M.** (2012). Zinc isotope fractionation during metabolic uptake by bacteria. Goldschmidt conference. Montreal, Canada.
138. Ma, L., Szyrkiewicz, A., **Borrok, D.M.**, McIntosh J. (2012). Using uranium isotopes to determine salinity sources in Rio Grande waters. Goldschmidt conference, June 2012, Montreal, Canada.
139. Szyrkiewicz, A., **Borrok, D.M.**, Vaniman, D. (2012). Fluxes of sulfide-derived sulfate in the Rio Grande valley. Goldschmidt conference, June 2012. Montreal, Canada.
140. **Borrok, D.M.**, NaverreteE, J., Kafantaris, F-C. (2012). A model for copper isotope fractionation during weathering and transport. Goldschmidt conference. Montreal, Canada. Keynote.
141. Nyachoti, S., Ma, L., **Borrok, D.M.**, Jin, L., Tweedie, C. (2012). Using U-series isotopes to determine sources of pedogenic carbonates: Comparison of natural and agricultural soils in the semi-arid southern New Mexico and western Texas. AGU Fall meeting 2012.
142. Garica, K.Y., Kafantaris, F-C. A., Walsh, E., **Borrok, DM.** (2012). Investigating copper fractionation and detoxification pathways in a model invertebrate using experimental and bioinformatic approaches. Society of Environmental Toxicology and Chemistry (SETAC) North America 33rd Annual Meeting.
143. Hargrove, W.L., **Borrok, D.M.** (2012). Sustainability on the Border: Water, Climate, and Social Change in a Fragile Landscape. Deep and Silent Waters: Challenges in Aquifer Sustainability. 2012 Annual Conference of the Soil and Water Conservation Society; July 22-24, Fort Worth, Texas.
144. **Lock, B.E.** (2012). Practical significance of deposition and diagenesis of Eagle Ford sediments in roadside outcrops, Val Verde County, Texas. Geoscience Technology Workshop, American Association of Petroleum Geologists, San Antonio, March, 2012, invited abstract/presentation.
145. Gary*, N., **Richter, C.**, Guidry*, E., Acton, G., Channell, J.E.T., Yamamoto, Y., Yamazaki, T., Ohneiser, C., Evans, H. (2012). Magnetostratigraphy, environmental magnetism, and cyclicity of Oligocene-Miocene sediments from the equatorial Pacific (IODP Site U1333). Abstract GP13B-1127 presented at 2012 Fall Meeting, AGU, San Francisco, California, 3-7 Dec.
146. **Duex, T.**, Comisky*, S., **Poudel, D.**, and **Richter, C.** (2012). Sediment magnetic susceptibility and instream water quality across the Coulee Baton microwatershed in southwestern Louisiana. Gulf Coast Association of Geological Societies Annual Meeting (Austin, 10/21/2012).

147. Sallay*, S., **Richter, C.**, Schramm, W. (2012). Geoelectrical imaging of hydrocarbon plumes: Two Louisiana case studies. Gulf Coast Association of Geological Societies Annual Meeting (Austin, 10/22/2012).
148. **Schubert, B.A.**, and Jahren, AH. (2012). "Incorporating the effect of changing atmospheric pCO₂ on terrestrial carbon isotope records." *Geological Society of America Abstracts with Programs* (oral).
149. Jahren, AH and **Schubert, B.A.** (2012). "The effect of atmospheric CO₂ concentration on carbon isotope fractionation in C₃ land plants." *Geological Society of America Abstracts with Programs* (poster).
150. Soileau, V., and **J.M. Visser**. (2012). Evaluation of natural vegetation for sediment runoff reduction. Louisiana Association of Professional Biologists / The Wildlife Society Louisiana Chapter 2012 Fall Symposium, Lafayette, LA.
151. **Visser, J. M.**, **S. M. Duke-Sylvester**, W. P. Broussard III, and J. Carter. (2012) Forecasting vegetation changes in coastal Louisiana with LaVegMod. 2nd State of the Coast Conference, New Orleans, LA
152. White, D. A., and **J.M. Visser**. (2012). The effect of climate and river discharge on interannual variation in aboveground biomass on delta splays. 2nd State of the Coast Conference, New Orleans, LA.
153. Constantin, A. J., and **J.M. Visser**. (2012). The effects of freezing and salinity on *Avicennia germinans* survival. 2nd State of the Coast Conference, New Orleans, LA

2011

154. Bryant J. Meyer, **B.C. Benson**, Emile A. Ancelet, Rakesh X. Bajpai and Mark E. Zappi (2011). Investigation of the potential for using sugar mill wastewater to multiculture retention-pond phytoplankton for biomass and lipid production. # 178 Abstracts: Aquaculture America 2011. New Orleans, LA.
155. Emile A. Ancelet, **B.C. Benson**, Bryant J. Meyer, Rakesh X. Bajpai and Mark E. Zappi. (2011). Studies on the phytoplankton collected in the Hypoxic zone of the northern Gulf of Mexico and their potential for biofuel production. # 177 Abstracts: Aquaculture America, New Orleans, LA.
156. Schnittker, K., Navarrete, J. U., Cappelle, I. J., **Borrok, D.M.** (2011). Bacterially mediated precipitation of ferric iron during the leaching of basaltic rocks. AGU Fall meeting 2011.
157. **Borrok, D.M.**, Szykiewica, A. A. (2011). Salt loads and the sustainability of the Rio Grande. AGU Fall meeting 2011.
158. Cox, C., Ganjegunte, G., **Borrok, D.M.**, Loughheed, V. L., Ma, L., Jin, L. (2011). Evaluation of soil sustainability along the Rio Grande in West Texas: Changes in salt loading and organic nutrients due to farming practices. AGU Fall meeting 2011.
159. Szykiewicz, A.A., **Borrok, D.M.**, Merrison, J. (2011). The role of sulfide weathering in the formation of the North Polar gypsum on Mars. The Fifth International Conference on Mars Polar Science and Exploration, Fairbanks, Alaska.
160. Walsh, E. J., **Borrok, D.M.**, Garcia, K. Y., Navarete, J., Schwarzbach, A. (2011). Transfer of copper in aquatic food webs. Society of Environmental Toxicology and Chemistry (SETAC): Mexican Focus Meeting 2011, Merida, Mexico.
161. Kafantaris, F., **Borrok, D.M.** (2011). Zn isotope fractionation during surface adsorption by bacteria. AGU Fall meeting 2011.

162. Thapalia, A., **Borrok, D.M.**, Van Metre, P. C., Wilson, J. T. (2011). Zinc isotopes in sediment core from urban and reference lakes across the United States. AGU Fall meeting 2011.
163. Nazarian, S., Doser, D. I., **Borrok, D.M.** (2011). A collaborative model for educating geophysical/ geological engineers. Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP) 2011, Charleston, SC.
164. Navarrete, J., Viveros, M., Ellzey, J.T., **Borrok, D.M.** (2011). Copper isotope fractionation by desert shrubs. *Geochemistry of Earth Systems* 9, Boulder, Colorado.
165. Szyrkiewicz, A., **Borrok, D.M.**, Rearick, M.S., Drury, D.O., Pratt, L.M. (2011). Anthropogenic and geologic salt loads in the Rio Grande. *Sustainability on the Border: Water, Climate, and Social Change in a Fragile Landscape*, El Paso, TX.
166. Drury, D.O., Szyrkiewicz, A., **Borrok, D.M.** (2011). Nitrate sources in the Rio Grande along the Mesilla Valley. *Sustainability on the Border: Water, Climate, and Social Change in a Fragile Landscape*, El Paso, TX.
167. Szyrkiewicz, A., **Borrok, D.M.**, Rearick, M.S., Drury, D.O., Pratt, L.M. (2011). Distinguishing between geologic and anthropogenic salt loads in the Rio Grande using sulfur isotope geochemistry. New Mexico Geological Society Spring Meeting, Socorro, NM.
168. Drury, D.O., Szyrkiewicz, A., **Borrok, D.M.** (2011) Nitrate fluxes in the Mesilla Valley of the Rio Grande. New Mexico Geological Society Spring Meeting, Socorro, NM.
169. AGU fall meeting. **R. Gottardi**, C. Teyssier, J. W. Valley, M. Spicuzza, W. O. Nachlas, A. Quilichini, T. W. Vennemann. (2011). Isotope exchange, fluid-rock interaction and thermomechanics of detachments: Raft River, Northwest Utah.
170. Minneapolis GSA Annual meeting. **R. Gottardi**, C. Teyssier, N. Seaton. (2011). Thermomechanics of a metamorphic core complex: Raft River Mountains (Northwest Utah).
171. Minneapolis GSA Annual meeting. **R. Gottardi**, P.-H. Kao, C. Teyssier, M. O. Saar. (2011). Fluid flow, heat transfer, and oxygen isotope exchange within metamorphic core complexes: Implications for interpreting oxygen isotope data.
172. 18th Deformation Mechanisms, Rheology and Tectonics, Oviedo (Spain). **R. Gottardi**, C. Teyssier, N. Seaton. (2011). Flow stress history of a detachment system: Combining recrystallized grain size, quartz CPO and deformation lamellae, Raft River (Northwest Utah).
173. Cordilleran Section and Rocky Mountain Section Joint Meeting, Logan. **R. Gottardi**, C. Teyssier, A. Quilichini, T. W. Vennemann, A. Mulch. (2011). Fluid-rock interaction and thermomechanics of detachments: Raft River, Northwest Utah.
174. Rosen, John, **G.L. Kinsland**, and C. W. Borst. (2011). Visualization and interpretation in 3D Virtual Reality of Topographic and Geophysical Data from the Chicxulub Impact Crater, Poster presented at and Abstract in Proceedings of the American Geophysical Union Meeting, San Francisco, CA, Dec. 4 – 10.
175. **Kinsland, G.L.** (2011). First Principles Analysis of Convection in the Earth's Mantle, Eustatic Sea Level and Earth Volume, Poster presented at and Abstract in Proceedings of the American Geophysical Union Meeting, San Francisco, CA, Dec. 4 – 10.

176. Yamazaki, T., Acton, G., Channell, J. E. T., Palmer*, E. C., **Richter, C.**, and Yamamoto Y. (2011). Long-term changes of relative paleointensity from sediments: Geomagnetic field behavior or rock magnetic artifact? *Abstract GP431A-07 presented at the 2011 Fall Meeting, AGU, 5-9 Dec.*,
177. Yamamoto Y., Acton, G., Channell, J. E. T., Palmer*, E. C., **Richter, C.**, and Yamazaki, T. (2011). Paleomagnetic and rock magnetic study of the IODP Site U1332 sediments - relative paleointensity during Eocene and Oligocene, *Abstract GP11A-1006 presented at the 2011 Fall Meeting, AGU, 5-9 Dec.*
178. Evans, H. F., Channell, J. E. T., Acton, G., and **Richter, C.** (2011). Magnetic stratigraphy from IODP Site U1338 between 8.5-10.8 Ma, *Abstract GP11A-1005 presented at the 2011 Fall Meeting, AGU, 5-9 Dec.*, 2011.
179. **Schubert, B.A.**, Jahren, AH, Eberle, JJ, Sternberg, LSL, Ellsworth, P, Eberth, DA, and Sweet, AR. (2011). "The best modern analog for Eocene Arctic forests is within today's Korean peninsula." American Geophysical Union Fall Meeting (oral).
180. **Schubert, B.A.**, Jahren, AH, Timmermann, A. "High-resolution carbon isotope analysis of Māmane trees." Holocene Paleoclimate in the Hawaiian Islands and Its Large-Scale Context, Hawai'i, November 7-8, 2011 (oral).
181. **Schubert, B.A.**, Jahren, AH, Eberle, JJ, Sternberg, LSL, Eberth, DA, and Sweet, AR. (2011). "Wet summers in the Eocene Arctic quantified from high-resolution carbon isotope measurements across fossil tree-rings." *Geological Society of America Abstracts with Programs*, 43(5) (oral).
182. **Schubert, B.A.** and Jahren, AH. (2011). "Early Eocene Arctic seasonality quantified from high-resolution, intra-ring $\delta^{13}\text{C}$ analyses across fossil evergreen wood" Cretaceous-Paleogene Palaeoenvironments, Tectonics and Biostratigraphy of the Arctic and Subarctic, Tromsø, Norway (oral, *invited*).
183. **Visser J. M., S. M. Duke-Sylvester**, and W. Broussard. (2011). Forecasting vegetation changes in coastal Louisiana: The future without additional action. Coastal and Estuarine Research Federation 21st Biennial Meeting, Daytona FL.
184. **Visser, J.M.** (2011). The effects of coastal management on herbivores: Implications for coastal resiliency. Society of Wetland Scientists South Central Chapter Meeting, Lafayette, LA.
185. **Visser, J.M.**, and J. Edwards. (2011). Proven and possible uses of bamboo in marsh reclamation. American Bamboo Society, Lafayette, LA.
186. **Visser, J.M.** (2011) The interaction between grazing and nutrient inputs and its implications for fresh water re-introduction. Joint meeting of Society of Wetland Scientists, Wetpol, and Wetland Biogeochemistry Symposium, Prague, Czech Republic.
187. Broussard W. P., and **J.M. Visser**. (2011). Characterizing salinity regimes for wetland vegetation along the northern Gulf of Mexico. Joint meeting of Society of Wetland Scientists, Wetpol, and Wetland Biogeochemistry Symposium, Prague, Czech Republic.
188. Tobin, E. J., and **J.M. Visser**. (2011). A comparison of marsh vegetation types using occupancy studies of small mammal populations in Louisiana. Joint meeting of the American Society of Mammalogy and the Australian Mammalogical Society, Portland, OR.

189. Tobin, E. J., and **J.M. Visser**. (2011). A comparison of marsh vegetation types using occupancy studies of small mammal populations in Louisiana. Joint meeting of Society of Wetland Scientists, Wetpol, and Wetland Biogeochemistry Symposium, Prague, Czech Republic.
190. Tobin, E. J., and **J.M. Visser**. (2011). A comparison of marsh vegetation types using occupancy studies of small mammal populations in Louisiana. VIth Meeting of the European Congress of Mammalogy, Paris, France

Funding

Grants and Contracts (Completed or Current Only)

2016

- La Board of Regents Enhancement Grant. Acquisition of an X-ray Diffractometer for Research and Training in Oil and Gas Exploration and Materials Evaluation. (2016-2017); **Borrok** PI, \$138,359.
- **Costigan, K.**, \$1,000 Faculty “Travel Grant (R1)” through the Academic Planning and Faculty Development at UL Lafayette.
- National Science Foundation-Archaeology, “Bridging Paleolimnology and Archaeology through Human Biomarkers in Lake Sediment: Demography, Land-use, and Climate in the Northwest Titicaca Basin” (08/01/2016-07/31/2017), Hillman, A.L., co-PI, (\$91,477 total, \$19,324 to UL-Lafayette).
- **Richter, C.**, \$29,973 BoRSF: Upgrading particle-induced x-ray capabilities at the Louisiana Accelerator Center. 6/16 –6/17. Role: Co-PI (PI: Hasenstein).
- **Schubert, BA**, University of Louisiana at Lafayette Travel Grant (Spring 2016: \$200)
- **Schubert, BA**, University of Louisiana at Lafayette Travel Grant (Fall 2016: \$500)
- National Science Foundation, Paleo Perspectives on Climate Change, “Development of **Schubert, BA**, new high-resolution pCO₂ records for quantifying Earth system climate sensitivity,” 2016-2019 (P.I.), \$347,945. Newly awarded in 2016.
- **Visser, J.**, SeaGrant UROP “Effects of flooding height, duration, and timing on *Spartina patens*”. \$2,100
- **Zhang, Rui**, Sinopec Houston LLC, Research for New Real Time Seismic Processing Technique, 2016, \$16K (Awarded).

2015

- National Science Foundation. Food-Energy-Water Nexus Supplement to current WSC-Category 1 grant. (8/1/14 – 7/31/17); **Borrok**, (PI), **\$96,645** to UL Lafayette. Supplement was obtained in 2015.
- Louisiana Board of Regents – Research Competitiveness Subprogram: **R. Gottardi**, (PI). Investigating fluid-rock interaction during continental tectonics, (09/01/2015 – 08/31/2018), **\$114,914**.
- Borst, C. and **G.L. Kinsland**, 2015, Visual Analytics Lab: Interactive Visualization and Analysis of Big Data for Research and Education, Equipment Grant funded from Board of Regents Traditional and Undergraduate Enhancement, Awarded: **\$89,929**.
- Water Quality Sampling in Bayou Chene Project, Louisiana Department of Environmental Quality, June 15, 2015 to September 30, 2017. **D. Poudel**. Amount awarded by LDEQ **\$507,644**. [PI] 35% time.

- **\$42,333**, STEP: Geology Student Computer Lab Upgrade (HH 322) – awarded FA15, **C. Richter**
- The Water Institute of the Gulf: **\$71,681**, 2017 Coastal Master Plan Model Development and Application: LaVegMod. PI **Visser**, CoPI: Duke-Sylvester 6/1/15 – 6/30/17, R4487
- LUMCON: **\$5,986**, Wetland Vegetation Class, PI **Visser** 7/15/15 – 7/25/15, R3986

2014

- National Science Foundation. WSC-Category 1 Collaborative: A surface water management framework to counterbalance groundwater withdrawals in wetter regions of the U.S. (8/1/14 – 7/31/17); \$600,000 (\$490,000 for UL: \$110,000 for McNeese). **Borrok PI.**
- Halliburton Foundation. Increasing the number of female geoscientists in the oil and gas industry (10/14 – 9/16); Borrok CO-PI, \$28,000.
- NSF OCE, **1232587**. (9/1/12-8/31/14 – with one-year extension to 8/15). *Collaborative Research: Experimental Study of Mineral-Fluid Fractionation of Non-Traditional Isotopes (Fe, Cu, Zn, S) with Implications for Seafloor Hydrothermal Systems*. Borrok is PI of UL-Lafayette portion, **\$68,000**.
- Title: Increasing the number of female geoscientists working in the oil and gas industry, Source of Support: Halliburton Foundation. Award Amount: **\$28,000**. Period covered: 09/01/2014-09/01/2016.
- Sea Grant UROP: **\$2,500** The effects of increased nutrient loads and nutria herbivory on Panicum hemitomon biomass. 3/14-12/14 Student: Jacob Thompson
- Sea Grant UROP: **\$2,500** Do salinity and fertilization affect Sagittaria lancifolia growth? 3/14-12/14 Student: Alexandria Pasch
- USGS National Wetland Research Center: **\$96,890** Development and refinement of vegetation based analytical tools and analysis of the Coastwide Reference Monitoring System (CRMS) dataset. 4/1/14 – 3/31/18
- USGS National Wetland Research Center: **\$44,847** Structured decision-making to facilitate multi-stakeholder coastal conservation and restoration under climate change uncertainties: Case study on barrier islands of the northern Gulf of Mexico. (6/14-6/15)
- Sea Grant: **\$158,386 (+102,006 match)** Impact of Climate Change on the Eco-Hydrology of Louisiana Coastal Ecosystem: Development of Research-Driven Student-Centered Learning Modules. PI Habib 8/18-7/16
- The Water Institute of the Gulf: **\$4,573** Phase I Modeling for Mid-Barataria Sediment Diversion: LA VegMod. PI: Duke-Sylvester 9/17/2014 to 2/28/2015,
- The Water Institute of the Gulf: **\$4,858** Phase I Modeling for Mid-Breton Sediment Diversion: LA VegMod Project. PI Duke-Sylvester 7/1/2014 to 12/31/2014,
- The Water Institute of the Gulf: **\$89,697** Basin-Wide Model Development for the LCA Mississippi River Hydrodynamic and Delta Management Study PI Duke-Sylvester, 3/15/2014 to 5/31/2015.

2013

- U.S. Geological Survey. \$105,000. Forest hydrology and accretion modeling to evaluate the impacts of Hurricane Sandy (9/15/13 – 9/14/15). **Borrok PI.**
- Louisiana Board of Regents (Multidisciplinary ENH Program) \$101,455. *Development of a Coastal Wetland Laboratory to Enhance Multi-disciplinary Education and Research*

- (7/1/13 – 6/30/14). **Borrok** CO-PI.
- Louisiana Board of Regents (Traditional Enhancement Program) \$259,275. *Cutting-edge instrumentation to support a shale gas/oil educational and research initiative at the University of Louisiana at Lafayette* (7/1/13 – 6/30/14). **Borrok** CO-PI.
 - Louisiana Board of Regents (Traditional Enhancement Program) \$259,275. Cutting-edge instrumentation to support a shale gas/oil educational and research initiative at the University of Louisiana at Lafayette (7/1/13 – 6/30/14). **Lock**, P.I.
 - US Geological Survey, \$315,000. Cooperative Ecosystems Studies Unit National Network. “Forest hydrology and accretion modeling to evaluate the impacts of Hurricane Sandy,” 2013-2016, (P.I.s **Borrok, D** and Broussard, W, co-P.I.s **Schubert, B.A.** and **Meriwether, J**).
 - U.S. Department of Energy, Basic Energy Sciences, Geosciences and Biosciences Division, \$195,745. “Fundamental research on the fractionation of carbon isotopes during photosynthesis: New interpretations of terrestrial organic carbon within geologic substrates,” 2013-2016 (P.I. **Schubert, B.A.**).
 - National Science Foundation. \$63,306. Sedimentary Geology and Paleobiology. "Paleoclimate analysis of a Miocene Arctic forest from the Kolyma River Basin, Northeastern Russia," 2013-2015 (P.I. **Schubert, B.A.**).
 - Board of Regents Support Fund. \$42,888. Enhancement Program. “Acquisition of a pyrolysis instrument to characterize organic carbon in support of a shale gas resource education and research initiative,” 2013-2015 (P.I. **Lock, B.E.**, co-P.I.s **Schubert, B.A.** and **Borrok, D.M.**), \$229,500.
 - National Science Foundation. \$200,000 (\$100,000 to UL). Collaborative Research: Resolving Centennial-Scale Environmental Change and Geomagnetic Field Variability from Iberian Margin Sediment Drifts Cored on IODP Expedition 339. 2013.
 - TWIG: \$280,870 Task 3.14: 2017 Master Plan Model Development and Application of LaVegMod. 9/1/13-8/31/17. (R4431). CoPI: Duke-Sylvester. Senior Scientists: Hester, Shaffer (SELU), and Couvillion (USGS)
 - CPRA. \$17,299. 6/1/13 – 5/31/14 (R3922) Louisiana Coastal Vegetation Survey: 2013
 - TWIG: \$32,204. Develop and apply an approach for interfacing LaVegMod with spatially explicit hydrodynamic models. 4/1/13-10/30/13 (R3923). CoPI: Duke-Sylvester.
 - BOR: \$101,455 (\$219,138 including match) Development of a Coastal Wetland Laboratory to Enhance Multidisciplinary Education and Research. 7/1/13-6/30/14 (R3911). CoPIs: **Borrok**, Habib.
 - TWIG: \$7,263 Phase I modeling for Lower Breton Sound Sediment Diversion: LaVegMod. 7/15/13 – 12/31/15 (R4428). CoPI: Duke-Sylvester.
 - TWIG: \$7,263 Phase I modeling for Lower Barataria Sediment Diversion: LaVegMod 7/15/13 – 12/31/15 (R4429). CoPI: Duke-Sylvester.
 - TWIG: \$8,731 Phase I modeling for Calcasieu Ship Channel Salinity Control Measures Project: LaVegMod. 7/15/13 – 12/31/15 (R3927). PI: Duke-Sylvester, CoPI: **Visser**.
 - LUMCON: \$4,705 Wetland Vegetation Class. (R3931) 7/1/13-7/15/13.

2012

- NSF OCE, \$68,000. 1232587. (9/1/12-8/31/14). Collaborative Research: Experimental Study of Mineral-Fluid Fractionation of Non-Traditional Isotopes (Fe, Cu, Zn, S) with Implications for Seafloor Hydrothermal Systems. **Borrok** is PI of UL-Lafayette portion.
- UTEP Interdisciplinary Research Enhancement Program. \$20,000 (2/6/2012 – 12/30/2012): A new approach to evaluating cellular copper binding and toxicity using copper isotopes. PI **Borrok**, CO-PI Walsh.
- Louisiana Department of Environmental Quality, \$883,322. The Mississippi River Basin Initiative (MRBI) Watershed Water Quality Monitoring in Bayou Chene and Lacassine Bayou Project. March 1, 2012 to September 30, 2013. PI **Poudel**
- Consortium for Ocean Leadership, (\$111,514 to UL). High-resolution, Environmental Magnetic Properties and Relative Geomagnetic Paleointensity of IODP Expedition 339 Cores 2012.
- LUMCON: \$33,000 CWPPRA Academic Advisory Group PPL22. R3884. (1/1/12-12/31/12)
- USGS National Wetland Research Center: \$39,364 Delineation of fresh, intermediate, brackish and saline marsh types of the north Central Gulf of Mexico Coast. R1383. (9/1/12-5/30/13).
- CPRA: \$9,553 Vegetation Module for Louisiana Coastal Protection and Restoration Master Plan, Amnd 1. R3891 (1/1/12-3/1/12).
- TWIG: \$5,000 Workshop Co-PI Duke-Sylvester. (10/12).

2011

- Travel Scholarship, \$1,650 to the National Women's Leadership Summit on Energy and the Environment Spring 2011, in Washington DC. All expenses paid.
- The Institute of Coastal Ecology and Engineering Undergraduate Internship, \$1,700. Summer 2011.
- NASA ROSES Program Mars Fundamental Research, \$243,895 (July 2011 - 2014): Sulfur cycling during the volcanic and climatic evolution of Valles Caldera - A geochemical analog for sulfate-mineral deposition on Mars. PI Szykiewicz, CO-I **Borrok**.
- Linc Energy Corp., \$141,158, FUNDED. Coal Research in Northern Louisiana, May 2011 – May 2013.
- U.S. Agency for International Development, \$79,990. Capacity-building and strengthening of livestock production system while adapting to climate change in Nepal. Livestock Climate Change Collaborative Research Support Program (LCC CRSP) Nepal Seed Grant project. This project is funded by the LCC CRSP, established through a cooperative agreement with the U.S. Agency for International Development. Funded for \$79,990. June 1, 2011 to January 31, 2013. [Completed] PI **Poudel**.
- U.S. Agency for International Development, \$79,990. Capacity-building and strengthening of livestock production system while adapting to climate change in Nepal. Livestock Climate Change Collaborative Research Support Program (LCC CRSP) Nepal Seed Grant project. This project is funded by the LCC CRSP, established through a cooperative agreement with the U.S. Agency for International Development. June 1, 2011 to May 31, 2012. PI **Poudel**.
- Consortium for Ocean Leadership, \$40,000. Ocean Drilling Program 2011.

- U.S Fish and Wildlife Service, \$42,888. Pacific Islands Climate Change Cooperative, “Reconstructing past Hawaiian precipitation using stable carbon isotope analysis of Māmane trees,” 2011-2013 (P.I. **Schubert, B.A.**, Co-P.I.’s Timmermann, A and Jahren, AH).
- SeaGrant Undergraduate Research Opportunities Program: \$2,500. Does salinity variation affect *Spartina patens* growth? (R2442) (5/1/11-9/1/11).
- LUMCON: \$33,000 CWPPRA Academic Assistance PPL21 (R3814). (1/1/11-12/31/11).
- Ducks Unlimited: \$3,245. Pilot Vegetation Map for Coastal Texas (R4384) (9/1/11-12/31/11).
- OCPR: \$141,326 Vegetation Module for Louisiana Coastal Protection and Restoration Master Plan R 3839 (12/1/11-9/30/12) Co-PIs: S. Duke Sylvester and W. Broussard.
- LDEQ: \$145,447 (\$58,503 match). Water Quality Monitoring in the Bayou Teche Watershed. PI: W. P. Broussard (1/1/11-8/31/11). Co-PIs: **J. M. Visser** and D. M. Hayes.

Invited Talks/Lectures, Including Plenary, and Keynotes, Etc.

2016

BORROK

- Presented talk titled, “Stress analysis of Louisiana’s water supply: Implication for water management” for the Water Resources Commission of Louisiana (December 8, 2016).
- Presented talk titled, “Water sustainability: A global (and local) challenge” for the Global Sustainability Workshop at UL. (October 2016).
- Panelist for a session titled, “Developing Policy-Relevant Groundwater Models. How Do We Create Tools with Adequate Detail and Maximum Usability?” for the Data Flow Conference in Baton Rouge, LA (May 9-10, 2016).

COSTIGAN

- Costigan, K.H., P.J. Soltesz, K.J. Jaeger, Catskill Environmental Research and Monitoring Conference, 28 October 2016.
- Costigan, K.H., and D.A. Allen. Spatiotemporal Patterns of Stream Drying and its Drivers in Four Intermittent Arizona Rivers. American Geophysical Union, San Francisco, CA, December 2016.
- Perkin, J.S., K.B. Gido, K. Costigan, M. Daniels, and E. Johnson. Fragmentation and drying ratchet down Great Plains stream fish diversity. American Fisheries Society, Kansas City, MO. August 2016.
- *Wellemeyer, J.C., J.S. Perkin, M.L. Jameson, K.H. Costigan, and R. Water. Hierarchy Theory Reveals Multiscale Threats to Arkansas Darter (*Etheostoma cragini*) in Modified Great Plains Riverscapes. American Fisheries Society, Kansas City, MO. August 2016.
- Costigan, K.H., C.W. Goss, P.C. Goebel., and K.L. Jaeger, Patterns of flow permanence and aquatic invertebrate communities in a forested corridor of north-central Ohio. Society of Freshwater Scientists, Sacramento, CA, May 2016.
- Allen D.C., K.H. Costigan, D.A. Kopp, D. Turner, G. Bodner, and T. Flood Can stream gage data predict large-scale drying patterns in intermittent river networks? An analysis

using long-term wet/dry mapping data from 3 intermittent rivers. Society of Freshwater Scientists, Sacramento, CA, May 2016.

GOTTARDI

- University of Tulane, Sept 2nd 2016, "Thermomechanics and hydrology of detachment shear zones."

HILLMAN

- Lake Sediments and Indian Summer Monsoon Variability", Denison University, 18 Jan 2016
- "Limnological Applications to Archaeology", University of Chicago, 12 Feb 2016

POUDEL

- 1st NAPA General Assembly, May 28, 2016, DFW Airport Hotel and Convention Center, 4440 W. Airport Freeway, Irving (Dallas), Texas, 75062, USA. Poudel, D.D. Rebuilding coupled with Sustainable Land Use, Food Security, and Agri-business for Community Resiliency in the Gurkha Earthquake Devastated Region in Nepal (Oral)
- Nepal Council of World Affairs (NCWA), NCWA Building, Lalitpur, Nepal, May 11, 2016. Poudel, D.D. Rebuilding coupled with Sustainable Land Use, Food Security, and Agri-business for Community Resiliency in the Gurkha Earthquake Devastated Region in Nepal (Oral)
- Nepal Reconstruction Authority (NRA), Singhadurbar, Kathmandu, Nepal. May 10, 2016. Poudel, D.D. Rebuilding coupled with Sustainable Land Use, Food Security, and Agri-business for Community Resiliency in the Gurkha Earthquake Devastated Region in Nepal (Oral)
- Chamber of the Chairman of Development Committee, Hon. Mr. Rabindra Adhikari, Legislature-Parliament, May 8, 2016. Poudel, D.D. Rebuilding coupled with Sustainable Land Use, Food Security, and Agri-business for Community Resiliency in the Gurkha Earthquake Devastated Region in Nepal

SCHUBERT

- Convener, "Interpretations of stable carbon isotope records in sedimentary systems," American Geophysical Union Fall Meeting, San Francisco, CA, 2016.
- University of Louisiana at Lafayette, Communities of Interest: Global Sustainability, October 28, 2016.
- "Atmospheric carbon dioxide persisted at near modern levels before and after the PETM," AGU Union Session.

VISSER

- Visser, J. M. Diversion Flooding: How could it affect plant growth. Expert Panel on Diversion Planning and Implementation, Baton Rouge, LA August 31, 2016 <http://thewaterinstitute.org/river-diversion-expert-advisory-panel/>

2015

COSTIGAN

- Allen, D.C., and Costigan, K.H. Arizona Riparian Council Annual Meeting, October 15, 2015.

KINSLAND

- Invited Presentation at the Louisiana State Bar Association Annual Meeting in Sandestin, FL: Geologic Perspective on the Legal Aspects of Hydraulic Fracking, May 2015.

SCHUBERT

- Invited seminar, Pacific Islands Climate Change Cooperative.
- Invited seminar, University of Southern Mississippi, Department of Geography and Geology.
- Invited seminar, University of Florida, Department of Geological Sciences.

2014

BORROK

- Louisiana Water Resources Commission 5th Regular Meeting, Lake Charles, LA; December 2014: A surface water management framework to counterbalance groundwater withdrawals in wetter regions of the U.S.
- Society of Independent Professional Earth Scientists (SIPES; Lafayette, LA); September 2014: *Petroleum source rock geochemistry: Pyrolysis and fluid chemistry*.
- University of Southern Mississippi, Department of Marine Sciences; February 2014: *Fractionation of Zn isotopes in biologic and anthropogenic systems*.

GOTTARDI

- Organizing and co-chairing a session called "Sedimentation, Tectonics, and Petroleum from the Heartland to the Caribbean" at the South Central meeting of the Geological Society of America (March 19-20, Stillwater, OK).

POUDEL

- Poudel, D.D. 2014. The Mississippi River Basin Initiative (MRBI) Watershed Water Quality Monitoring in Bayou Chene and Lacassine Bayou in Louisiana, ASA, CSSA, & SSSA International Annual Meeting, November 2 – 5, 2014, Long Beach, California. (Oral)
- Moore, K., D.D. Poudel, T. Duex. Hydrogeology and water quality in Bayou Chene and Lacassine Bayou in southwestern Louisiana. 64th Annual Convention of the Gulf Coast Association of Geological Societies (GCAGS) and Gulf Coast Section of SEPM, October 5-7, 2014, Lafayette, Louisiana, USA (Poster).
- Comiskey, Sean, D.D. Poudel, T. Duex, and C. Richter. Variation in Instream Water Quality and Magnetic Susceptibility across the Coulee Baton Microwatershed in Southwestern Louisiana, 64th Annual Convention of the Gulf Coast Association of Geological Societies (GCAGS) and Gulf Coast Section of SEPM, October 5-7, 2014, Lafayette, Louisiana, USA (Poster)
- Poudel, D.D. 2014. Reducing Nutrients, Fecal Coliform, and Sediment Concentrations in the Lower Mississippi River Sub-Basin. 69th SWCS International Annual Conference,

Making Waves in Conservation, July 27-30, 2014, Westin Lombard Hotel 70 Yorktown Center, Lombard, Illinois. (Oral)

- Poudel, D.D. 2014. Improving Surface Water Quality of an Agricultural Watershed using Planned Intervention Microwatershed Approach. 7th International Conference on Environmental Science and Technology, June 9-13, Crowne Plaza Hotel near Reliant Center, Houston, Texas, USA, (Oral)
- Poudel, D.D. 2014. A Quick Assessment of Soil Conditions through Focus Group Discussions, Participatory Rural Appraisals, and Soil Sampling in the Mid-Hills Region of Nepal, Soil Science Society of America (SSSA) Ecosystem Services Conference (Specialized Conference), Soil's Role in Restoring Ecosystem Services, March 6-9, 2014, Sacramento, California. Abstract available at <https://scisoc.confex.com/crops/2014SES/webprogram/Paper84503.html> (Oral)
- Invited speaker for the Climate Resilient Livestock Feeding System for Global Food Security. Global Animal Nutrition Conference, April 20-22, 2014, Bangalore, India.

VISSER

- Visser J.M., A. Pasch, and C. E. Sasser. 2014. Changes in distribution of common plant species in coastal Louisiana: 1997- 2013. State of the Coast Conference March 18-20, 2014 New Orleans, LA.
- Broussard, W. P., and J. M. Visser. 2014. Redefining salinity regimes for wetland vegetation along the Louisiana coast. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
- Duke-Sylvester, S. M., J. M. Visser, and W. P. Broussard. 2014. Modeling Louisiana's coast plant communities. State of the Coast Conference March 18-20, 2014, New Orleans, LA.
- Visser J.M., A. Pasch, and C. E. Sasser. 2014. Changes in distribution of common plant species in coastal Louisiana: 1997- 2013. 30th Annual Louisiana Remote Sensing and GIS Workshop, May 13-14, 2014, New Orleans, LA.
- Visser J.M., and A. Pasch. 2014. Changes in plant species distributions along the Louisiana coast: 1997- 2013. Joint Aquatic Sciences meeting, May 18-23, Portland, OR.

2013

- Keynote speaker at the 2013 V. M. Goldschmidt Conference, Florence, Italy.
- Guest Speaker, Louisiana Nutrient Management Strategy Stakeholder Engagement Meetings.
- Invited Speaker Eos Trans. AGU Fall Meeting.
- Invited Panelist, Coastal Master Plan, LUMCON Open House, Cocodrie, LA.

2012

- Keynote speaker at the 2012 V. M. Goldschmidt Conference, Montreal, Canada.
- Southwest Louisiana Geophysical Society March Meeting.
- Knowledge Forum on Innovation, Kathmandu, Nepal.
- Invited Speaker, Mangrove Workshop, Lafayette, LA.

2011

- Invited seminar; US Geological Survey, Denver, Colorado.
- Invited seminar; Michigan State University, East Lansing, Michigan.
- Invited seminar; Rutgers University, Newark New Jersey.
- Invited presentation at the GSA Annual Meeting, Minneapolis, Minnesota.
- Powerpoint presentation to UL Faculty and Staff.
- Coulee Baton Workshop.
- Invited Speaker Cretaceous-Paleogene Palaeoenvironments, Tectonics and Biostratigraphy of the Arctic and Subarctic, Tromsø, Norway.
- Invited Speaker, Diversion Workshop. Lafayette, LA.

Editorships

Borrok

- Editorial Boards for Chemical Geology and Frontiers in Microbial Chemistry.

Lock

- Editorial Board for volume 1 of the GCAGS Journal – a fully peer-reviewed journal (2012).

Poudel

- Editorial Advisory Board Member – Agriculture, Ecosystems & Environment Journal.

Books and Book Chapters

2016

- Justic, D., S. M. Duke-Sylvester, **J. M. Visser**, Z. Xue, J. Liang. 2016. Chapter 11. Coastal Ecosystem Modeling in the Context of Climate Change: An overview with case studies. Pages 227-260 In: Developments in Environmental Modeling Vol 28: Ecological Model Types, S. E. Jørgensen (ed). Elsevier.

2013

- William R. Sherman, **G. L. Kinsland**, C. Borst, Eric Whiting, Jurgen Schulze, Philip Weber, Aashish Chaudhary, Simon Su and Daniel S. Coming, 2013 in press, Immersive Visualization for the Geological Sciences. *Handbook of Virtual Environments*, 44 pages.
- **Poudel, D.D.**, R.P. Thakur, **T.W. Duex**, A. Singh, K.K. Acharya, **E.G. Blakewood**, B. Chapagain, S. Adhikari, **A. DeRamus**, R.B. Gramling. (2013). Climate change and other factors degrade Nepalese livestock systems, Research Brief (RB-13-2013), Adapting Livestock Systems to Climate Change Collaborative Research Support Program, Colorado State University, USA, www.lcccrsp.org.
- **Visser, J. M.**, W. P. Broussard III, Gary P. Shaffer, and J. W. Day Jr. (2013). Climate Change effects on the Ecology of the Mississippi River Delta. T.S. Bianchi, M. A. Allison, and W-J Cai (eds.) *Biochemical Dynamics at Large River-Coastal Interfaces: Linkages with Global Climate Change*. Cambridge University Press, New York. Chapter 17, pp. 397-420.

2012

- **Poudel, D.D.**, R.P. Thakur, A. Singh, M.R. Tiwari, and **A. DeRamus**. 2012. Adapting livestock production system to climate change: Assessing feed, nutrition, and animal health, Research Brief (RB-05-2012). Adapting Livestock Systems to Climate Change Collaborative Research Support Program, Colorado State University, USA, www.lcccrsp.org
- **Poudel, D.D.**, R.P. Thakur, and A. Singh. 2012. Adapting livestock production systems to climate change: Community capacity-building for better animal health, feed, soil and water, Research Brief (RB-02-2012). Adapting Livestock Systems to Climate Change Collaborative Research Support Program, Colorado State University, USA, www.lcccrsp.org
- **Visser, J. M.**, J. W. Day, Jr., L. L. Battaglia, G. P. Shaffer, and M. W. Hester. 2012. D. Batzer and A. Baldwin (eds.) Wetland Habitats of North America: Ecology and Conservation Concerns. University of California Press. *Mississippi River Delta Wetlands*, Chapter 5, pp. 63-74.
- Battaglia, L. L., M. S. Woodrey, M. S. Peterson, K. S. Dillon, and **J. M Visser**. 2012. D. Batzer and A. Baldwin (eds.) Wetland Habitats of North America: Ecology and Conservation Concerns. University of California Press. *Coastal Ecosystems of the Gulf and Atlantic Coastal Plains*, Chapter 6, pp. 75-88.

2011

- Rivera-Monroy, V. H., R. D. DeLaune, A. B. Owens, **J.M. Visser**, J. White, H. Hernandez-Trejo, and R. R. Twilley. 2011. E Wolanski and D. S. McLusky (eds): Treatise on Estuarine and Coastal Sciences. Waltham: Academic Press. *Removal of physical materials from systems: Loss of space, area, and habitats*, Chapter 3, pp. 185-215.

Other

Organized Special Sessions or Conferences

2016

Poudel, Durga

- Hosted 1 stakeholder's meeting for Bayou Chene Project in Jennings, Louisiana.

Schubert, Brian

- Convener, "Interpretations of stable carbon isotope records in sedimentary systems," American Geophysical Union Fall Meeting, San Francisco, CA, 2016.

2015

Lock, Brian

- Organized 2-day course in Seismic Interpretation for 40 students from UL, LSU, UA, UNO, USM, MSU, etc, with industry sponsors and instructors, January 2015.

Schubert, Brian

- Convener, “Interpretations of Stable Carbon Isotope Excursions in the Geologic Record,” American Geophysical Union Fall Meeting, San Francisco, CA, 2015.

2014

Richter, Carl

- Reviewer for Earth, Science, and Space.
- GCAGS 2014 meeting committee chair.

Schubert, Brian

- Convener, “The Biogeochemistry of Biological Systems,” Goldschmidt, Sacramento, CA, June 8-13, 2014.
- Conference organizer: International Program Committee Team Member, Biogeochemistry, 2014 Goldschmidt Conference.

Visser, Jenneke

- Program Committee 2014 State of the Coast Conference.

2013

- Organized a technical session on Water Sustainability for the 2013 South Central GSA Meeting.
- Organized a technical session on transition metal isotope chemistry for the 2013 Annual GSA Meeting.
- South Central Section – 47th Annual Meeting of GSA, Austin Texas, April 4-5, 2013. Co-hosted the session: The Role of the Geosciences in water Sustainability: Examples, Challenges and Societal Impacts.

2012

- Program Committee 2012 State of the Coast Conference (112 presentations in 4 concurrent sessions, 162 posters).

2011

- Organized a topical session on hydrologic sciences for a 2011 conference devoted to the sustainability of the Rio Grande, University of Texas at El Paso.

Awards and Honors

2016

Borrok, David

- Research and Sponsored Projects Award, UL Lafayette (for > \$150,000 in external funding).

Hillman, Aubrey

- Certification of Excellence in Reviewing, Journal of Paleolimnology
- Ohio State University Byrd Polar and Climate Research Center Post-Doctoral Fellow

Poudel, Durga

- Outstanding Achievement in Externally Funded Research Award (Intended to recognize those who have been awarded externally sponsored projects in an amount of \$500,000 or more during the 2014-2016 academic years).

Schubert, Brian

- Schubert, BA, Rising Star Award, Ray P. Authement College of Sciences, University of Louisiana at Lafayette, Academic Years 2014-2016

2015**Costigan, Katie**

- 2015-2016 LADIA Fellow

2014**Benson, Barbara**

- Life Time National Algae Association – Life Time Membership

Borrok, David

- Awarded the South Louisiana Mid-Winter Fair Association Professorship II
- Awarded “Outstanding Achievement in Research and Sponsored Activities” award

Gottardi, Raphael

- Summer Research Award

Schubert, Brian

- University of Louisiana at Lafayette Travel Grant (\$902)

2013

- American Association of Petroleum Geologists, Distinguished Service Award.
- South Louisiana Mid-Winter Fair/BORSF Regents Professorship in Renewable Resources, Fall 2010-Spring 2013.
- Best University Research Award, Department of Energy, Basic Energy Sciences.
- Certificate of Achievement in Research and Sponsored Activities. UL Lafayette.
- Certificate of Commendation for Exemplary Service from the Louisiana Coastal Wetlands Conservation and Restoration Task Force.
- Outstanding Academic Advisor Award, May 8, 2013, University of Louisiana at Lafayette.

2012

- Outstanding Academic Advisor Award, University of Louisiana at Lafayette.
- Certificate of Achievement in Research and Sponsored Activities. UL Lafayette.

2011

- Elsevier “top 50 most cited article” in *Chemical Geology* (2006-2011).
- Chosen by the National Academy of Sciences to attend the 2011 *Chinese-American Kavli*

Frontiers of Science symposium in Shengzen, China.

- Exceptional Reviewer, Geological Society of America Bulletin.
- Outstanding Academic Advisor Award, May 6, 2011, University of Louisiana at Lafayette.

Other Accomplishments

BENSON

- American Society of Civil Engineers.
- Louisiana Engineering Society.
- World Aquaculture Society.
- Phi Kappa Phi Honor Society.
- National Algae Association – Life Time Membership.

BORROK

- EMember, American Association of Petroleum Geologists.
- Member, Geological Society of America.
- Member, American Geophysical Union.
- Member, Geochemical Society.
- NSF Hydrologic Sciences Panel (2012).
- Chair, Program Committee of the Geochemical Society (2011-present).
- Director, Center for Earth and Environmental Isotope Research (CEEIR) in the Department of Geological Sciences at UTEP (2009-2012).
- Member, Geological Society of America's Committee on Research Grants (2009-2011).
- Chair, Advisory board for the Department of Geology and Geophysics at the Missouri University of Science and Technology (2011-present).
- Member, Advisory board for UTEP's College office for Undergraduate Research Initiatives (COURI, 2010-present).
- Member, faculty review panel for the UTEP College of Sciences' strategic research plan (2011).

GOTTARDI

- AGU member since 2010

KINSLAND

- President of the Southwest Louisiana Geophysical Society 2011 to present.

LOCK

- AAPG member.
- SEPM member
- Lafayette Geological Society – Honorary Member.
- IAS Member.
- GCAGS, committee member and member of Board of Directors.
- Faculty mentor for Imperial Barrel Award team since inception, with first place in the Gulf Coast competition, 2012 and first place International competition 2012.

POUDEL

- Member- Geological Society of America (GSA) since March 2013.
- Member – Soil and Water Conservation Society, USA, since 2002.

VISSER

- Member, Society of Wetland Scientists.
- Member, Coastal and Estuarine Research Federation.
- Member, Ecological Society of America.

Graduate Student Production

M.S. Students Graduated

Adesiyun, Oludamilola	FA16	Dada, Olamide	SP14
Angelo, Jared	FA16	Higginbotham, Brennan Thomas	SP14
Bannister, Terri	FA16	Simonis, Alan Finbar	SP14
Bujard, Jade	FA16	Stiles, Lauren	SP14
Conlin, Daniel	FA16	Mcvey, Timothy Keith	SP14
Juneau, Jacob	FA16	Bearb, Nicholas	FA13
Lipman, Hunter	FA16	Lahey, Michael	FA13
Mason, Shanna	FA16	Roy, Michelle	SP13
O'Brien, Michael	FA16	Hatamian, Christopher	SP13
Schaper, Maxwell	FA16	Ledy, Lawrence	FA12
Boucher, Ryan	SP16	Dudley, Daniel C	FA12
Costa, Ayrton Luiadi Cunha Da	SP16	Salathe, Lauren Christine	FA12
Hoang, Hong Thuy	SP16	Jing, Ling	SU12
Monlezun, Christian	SP16	Sallay, Scott Alma	SU12
Shane, Timothy	SP16	Egedahl, Kaare David	SP12
Berkland, Michael	FA15	Jordan, Kevin Brian	SP12
Dayley, Jason	FA15	Lindsay, James Arthur	SP12
Guynes, Jake	FA15	Whitcomb, Nicholas P	FA11
Hamilton, Scott	FA15	Kessler, Richard Pate	FA11
Helm, Jolie	FA15	Comiskey, Sean Patrick	FA11
Spezia, Kyle	FA15	De Palacios Zambrana, Javier	FA11
Sutton, Daniel	FA15	Hahn, Katherine Sandra Ann	FA11
Weitkunat, Sydney	SP15	Reamer, Joshua Kelly	SP11
Elhelou, Othman	SP15	Kim, Sunghoon	SU11
Landry, Todd	SP15	Kruse, Adam Courtland	SU11
Lasisi, Ayokomi	SP15	Root, Gregory Allan	SU11
Moore, Keith	SP15	Armbruster, Ryan T	SP11

Trahan, Matthew	SP15	Cottam, Blaine Robert	SP11
Weitkunat, Sydney	SP15	Palmer, Emily Catherine	SP11
Murley, Christopher	FA14		

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This report does not include the considerable committee and administrative services that our faculty members perform at UL Lafayette at the Department, College and University levels.
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