# **Curriculum Vitae**

# Samuel Jackson Bentley, Sr. Professor of Geology Harrison Chair in Sedimentary Geology

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# Leadership Experience and Collaborative Skills

- Demonstrated ability to envision new projects and goals in research and higher education, and to develop necessary framework to build from vision to a successful reality
- Demonstrated ability to build and work with multidisciplinary teams of diverse composition (academic, government, NGO, indigenous) to achieve complex objectives
- Record of success in building industry and government partnerships with higher education
- Experience in consensus building, conflict resolution, planning for and achieving success
- Skill in use of budgetary and performance data to plan strategically

# Areas of Scientific Expertise

- Marine Sedimentology, focusing on processes and geological products on continental margins, including coastal change and deltaic systems
- Geological, climatic, and anthropogenic controls continental margin sedimentary strata
- Sediment Radiochemistry, focusing on measurement of seabed processes using Useries and fallout isotopes

# **International Experience**

- Record of grant success in US (federal and state agencies), Canada (federal and indigenous governments), New Zealand
- Five years residing in Newfoundland, Canada, as a federally funded academic researcher
- Funded for research (coastal to deep-sea settings) in Papua New Guinea, New Zealand, Canada (Scotian Slope, Hudson Bay, Labrador Sea, Baffin Bay, Hudson Strait), New Caledonia, Gulf of Mexico (onshore and offshore Mississippi Delta; Mississippi-Alabama shelf), with additional oceanographic field experience in Indonesia, Solomon Islands, Australia, Germany, Florida Keys, Alaska

# **Google Scholar**

H-index 31, >3,000 citations (as of August 21, 2022) https://scholar.google.com/citations?hl=en&user=iwHynpoAAAAJ

# Education

1998	PhD, Coastal Geological Oceanography, SUNY Stony Brook, C. A.
	Nittrouer, advisor
1992	MS, Geology, University of Georgia, R.W. Frey, advisor
1985	BA, Theater with additional concentration in Geology, Magna Cum
	Laude, University of Georgia

# **History of Assignments**

2014-Present	Professor and Harrison Chair in Sedimentary Geology, Department of
	Geology and Geophysics, LSU
2019-2022	Vice President for Research and Economic Development, LSU Office of
	Research and Economic Development
2019	Interim Vice President for Research and Economic Development, LSU
	Office of Research and Economic Development
2017-2019	Associate Dean for Research and Administration, LSU College of
	Science
2017-2019	Associate Director, Coastal Studies Institute, LSU
2017	Erich and Lea Sternberg Professor, LSU Honors College
2012-2017	Director, Coastal Studies Institute, LSU
2011-2014	Associate Professor and Harrison Chair in Sedimentary Geology,
	Department of Geology and Geophysics, LSU
2011-2016	Adjunct Professor, Earth Sciences Department, Memorial University of
	Newfoundland, Canada
2010-2011	Deputy Department Head, Earth Sciences Department, Memorial
	University of Newfoundland, Canada
2006-2011	Canada Research Chair in Seabed Processes and Seabed Imaging, and
	Associate Professor, Earth Sciences Department, Memorial University of
	Newfoundland, Canada

2006-Present	Adjunct Professor, Department of Oceanography and Coastal Sciences,
	LSU
2004-2006	Associate Professor, Department of Oceanography and Coastal Sciences,
	LSU
1999-2004	Assistant Professor, Department of Oceanography and Coastal Sciences,
	LSU
1998-1999	Postdoctoral Fellow, Naval Research Laboratory, Stennis Space Center

# **Recent LSU Achievements in Research and Economic Development under Bentley's leadership**

- LSU earned a record \$188 million in grant and contract awards in FY 2022
- LSU earned a record \$166.1 million in grant and contract awards in FY2021 (up from ~decade average near \$150 million)
- LSU awarded \$5 million grant from NASA for digital twin and augmented reality/virtual reality production in 2022, driving 21-fold increase in research funding to LSU College of Art and Design
- LSU is one of two partners (one academic, one contractor) in pending \$30 million ONR award in marine autonomous vehicle research
- Pending federal awards from NIST and NOAA (\$6 million total) for cyberphysical test environments and coastal RADAR systems, achieved via legislative support.
- LSU awarded \$12.5 million by State of Louisiana to purchase new AI supercomputer for the Louisiana statewide university research network in 2022.
- LSU awarded \$5 million by State of Louisiana to develop energy-transition technologies for the South Louisiana Industrial Corridor in 2022.
- LSU achieved a 55% increase in biotechnology awards to LSU from 2019 (\$24 million) to 2021 (\$37.3 million).
- LSU doubled the campus success rate for NSF CAREER awards from 2019 to 2020 and maintained that success in 2021 and 2022.
- LSU achieved a record number of US patents for FY2021 (67), ranking in the top 100 universities internationally for US utility patents in 2020.
- US Army Grant of \$10 million upgrade to light- and transmission-electron microscopy facilities at LSU, with Bentley as PI
- NSF ADVANCE Award, coPI, focused on success of intersectional women faculty in STEM colleges at LSU.
- Review and reorganization of existing ORED funding program within LSU to provide more balanced support for wider range of faculty needs
- Development of new communications and proposal-development programs to support the achievements above.

# Prior Accomplishments

Associate Dean for Research and Administration, LSU College of Science, 2017-2019

- Developed and led study of possible future costs to College of Science for faculty expansion proposed for 2019-2013
- Developed and led a first-ever study of College of Science faculty return on investment for all hires 2006-2018, based on startup costs and grant revenue generated
- Participated in 2018 NSF ADVANCE proposal to study and support success of female faculty and intersectionality in LSU STEM departments. Although the proposal was not funded, the process taught me a tremendous amount about challenges faced by women faculty, about feminist intersectionality, and about the LSU climate, based on our seven months of work, and a climate study.
- Developed and led study of cost to College of Science for "stop the tenure clock" requests, due to delayed lab construction 2013-2019
- Developed and led study of cost to College of Science for Science faculty lost to other universities
- Developed and led College of Science effort to develop six new interdisciplinary strategic initiatives, Fall 2017, using NSF-style panel competition

Director, LSU Coastal Studies Institute (CSI), 2012-2017

- Led expansion of LSU Coastal Studies Institute to become one of the largest and most robust interdisciplinary research units on the LSU campus, from eight faculty in one college to ~30 faculty across five colleges, and six staff
- Led turnaround from multiple years of budget deficits to balanced budgets
- Obtained new lines of graduate research support for CSI

Chair, LSU Coastal Sustainability and Environment Working Group, 2012

- Tasked with envisioning new approaches to coastal research centers at LSU
- Led study of existing LSU coastal research units, and the reorganization of the Coastal Studies Institute (chartered 1954) to become a campus-wide unit
- Established new lines of financial support for CSI based on new indirect cost return to the Institute

Professor and Billy and Ann Harrison Chair in Sedimentary Geology, LSU Geology and Geophysics, 2011-Present

- Terrebonne Parish Indian Education Program Annual Youth Leadership Program 2014-Present, co-lead for workshop with emphasis on teaching Native American students about college educational opportunities
- Co-lead (with R. Twilley) on NSF Coastal SEES grant, 2014-2019, studying coupling among delta morhpodynamics, community flood risk, and rivermanagement policies for the Mississippi River, spanning years of 1850-2100. In this study, we are establishing the radius-of-influence for sediment dispersal in from river-sediment diversions, we have identified key environmental factors that drive population migration within and out of the Delta, and we have determined that deltaic land loss has had driven a large increase in community flood risk from hurricane surge since ca. 1850
- PI on BOEM-funded study (2013-2019) of submarine landslides on the Mississippi River Delta Front, including the first regional geological and

geophysical surveys of the Delta Front since 1977-1979. This work is leading to a new understanding of temporal and spatial scales of mass transport on the Delta Front

Canada Research Chair in Seabed Processes, Earth Sciences Department, Memorial University of Newfoundland, 2006-2011

- PI for Canadian federal grants that obtained five years of my salary (12 months per year), full startup costs for a new marine geological lab, and oceanographic field and lab support for five years of research in the Canadian Arctic and Subarctic
- Chief scientist for first coastal-fjord geological and marine-ecosystem surveys of Torngat Mountains National Park, Northern Labrador, Canada's newest national park at that time
- Partnered with Inuit Government (co-managers with Parks Canada of Torngat Mountains National Park) and Inuit community leaders for exchange of scientific knowledge and traditional ecological knowledge of the park region
- Chief Scientist for ArcticNet oceanographic research cruise on the November 2009 CCGS Amundsen survey of Hudson Strait, western Labrador Sea, and fjords of the Torngat Mountains National Park.

Assistant/Associate Professor, LSU Department of Oceanography and Coastal Sciences

- NSF CAREER Award (2001)
- Tiger Athletic Foundation Teaching Award (2003)
- Designed and gained approval for a new minor in Oceanography (2004), and new undergraduate oceanography course sequence; this was the first undergraduate academic program developed by the Department of Oceanography to that date

# Honors

Fellow, American Association for the Advancement of Science
Eric and Lea Sternberg Professorship, top honor awarded annually by
the LSU Ogden Honors College
Billy and Ann Harrison Endowed Chair in Sedimentary Geology, LSU
Department of Geology and Geophysics
Research Councilor (internationally-elected position), Society for
Sedimentary Geology
Canada Research Chair in Seabed Processes and Seabed Imaging,
Memorial University of Newfoundland. Awarded based on international competition.
Visiting Scientist Fellowship for 2006, National Institute of Water and
Atmospheric Research, New Zealand
James Lee Wilson Award, Society for Sedimentary Geology, in
recognition of "Excellence in Sedimentary Geology by a Young Scientist"
LSU Tiger Athletic Foundation Award for Excellence in Teaching
NSF CAREER Grant (see funding)

2000	Alan Berman Award for Outstanding Publication authored by US Navy
	<i>Employee</i> : Furukawa, Y., Bentley, S.J., Shiller, A., Lavoie, D., and Van
	Cappellen, P., 2000, Early diagenesis driven by biologically enhance
	oxygen flux in North Key Harbor, Dry Tortugas National Park, Florida,
	Journal of Marine Research 58: 493-522.
1999	Outstanding Paper Published in Palaios: Bentley and Nittrouer, 1999,
	Physical and Biological Influences on Sedimentary Fabric in a Oxygen-
	depleted Depositional Environment.
1998-1999	NRL/CORE Postdoctoral Fellow
1985	Bachelor of Arts in Theater, Magna Cum Laude, University of Georgia
1985-1986	University of Georgia Graduate School Scholarship
1985-Present	Member, Phi Beta Kappa Society
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Offered *NRL-SSC Visiting Scientist Fellowship* for Summer 2000 (declined due to scheduling conflicts)

# **Professional and Administrative Appointments**

2018-Present	Member, Coastal Advisory Team for the Louisiana 2023 Coastal Master
	Plan, appointed by the Louisiana Coastal Protection and Restoration
2010 D	Authority.
2018-Present	
2017-2019	(nominated by US Department of State, appointed by UN)
2017-2019	<i>Coordinator</i> , Louisiana State University (LSU) College of Science Strategic Plan Development
2016-Present	<i>Member</i> , LSU 2017 Strategic Plan, Coast & Environment Subcommittee
2016-2018	<i>Member</i> , Coastal Research Council, LSU Office of Research and
2010 2010	Economic Development
2016	Member, Review Panel for East China Normal University State Key
	Laboratory for Estuarine and Coastal Research
2015-2017	Academic Stakeholder Representative, Framework Development Team
	for Louisiana's 2017 Coastal Master Plan
2015-Present	Guest Educator, Terrebonne Parish Indian Education Program Youth
	Leadership Weekend Workshops
2014-2017	<i>Technical Liaison</i> , Louisiana Coastal Master Plan 2017 Science and
2014	Engineering Board (responsible for Master Plan technical peer review)
2014	<i>Member</i> , Louisiana Board of Regents Master Plan Research Advisory Subcommittee for Coastal and Water Resources
2013-2017	<i>Director</i> , LSU Coastal Studies Institute (appointed by Vice Chancellor for
2013-2017	Research and Economic Development)
2013	<i>Member</i> , LSU Transition Advisory Team, Research and Discovery
	Subcommittee
2012-2013	Member, Search Committee for LSU Vice Chancellor for Research and
	Economic Development

2012-2015	<i>Chair</i> , Education and Knowledge Transfer Working Group of the Community Surface Dynamics Modeling System (NSF Facility, csdms.colorado.edu)
2012-2015	<i>Member</i> , Executive Committee of the Community Surface Dynamics Modeling System (NSF Facility, csdms.colorado.edu)
2012-2013	<i>Member</i> , LSU CCT Computational Science Application Search Committee
2012	<i>Chair</i> , LSU Coastal Sustainability and Environment Working Group, established by the Vice Chancellor (Research and Economic Development) to expand and reorganize LSU Coastal Studies Institute
2011-2016	<i>Guest Lecturer</i> , Williams College-Mystic Seaport Maritime Studies Program, Mississippi Delta Field Seminar, Spring and Fall semesters, every year
2011-2014	<i>Chair</i> (2011-2013) and <i>Member</i> , LSU Geology and Geophysics Endowed Chairs Search Committee
2011-2012	Member, LSU Geology and Geophysics Executive Committee
2011-2012	<i>Member</i> , LSU Oceanography and Coastal Sciences Coastal Geologist Search Committee
2011-2013	Graduate Advisor, LSU Department of Geology and Geophysics
2010-Present	
2010-2014	<i>Member</i> , Special Engineering and Science Team for Restoration of the Mississippi Delta, funded and organized by the National Audubon Society, Environmental Defense Fund, and National Wildlife Federation, chaired by Dr. John Day
2010-2012	<i>Research Councilor</i> , SEPM (SEPM-wide elected position on Executive Council)
2010	<i>Invited Speaker</i> , AAPG Mudstones Session, New Orleans, April 2010
2009-2012	Associate Editor (Sedimentology and Stratigraphy), Canadian Journal of Earth Sciences
2009	Chief Scientist, CCGS Amundsen 2009 Arctic Expedition, Leg 4B
2009	<i>Participant</i> , NSF-Margins S2S Synthesis Workshop, Gisborne New Zealand
2008-2009	<i>President</i> , Geological Association of Canada, Newfoundland and Labrador Section
2008	<i>Convener</i> , Special Session on River-Ocean Interactions in the North, Arctic Change 2008
2007-2009	<i>Graduate Advisor</i> , Memorial University of Newfoundland Earth Sciences Department
2007-2008	<i>Vice President</i> , Geological Association of Canada, Newfoundland and Labrador Section
2007-2012	Network Investigator, ArcticNet (Canada) Research Consortium
2006	<i>Invited Speaker</i> , NSF Margins TEI: Telecommunications from Source to Sink
2005	<i>Convener</i> , AGU Spring '05 Session on Bioturbation and Contaminant Mass Transfer

2004	Education Panelist, NSF CAREER Proposal Review Panel
2004	Author, Undergraduate Minor Proposal for LSU Department of
	Oceanography and Coastal Sciences. This proposal was accepted by LSU
	and is now an important component of the growing undergraduate
	program in Oceanography and Coastal Sciences.
2003-2004	Instructor, Louisiana Center for Ocean Science Education Excellence
2004	Co-instructor, Williams College-Mystic Seaport Mississippi Delta Field
	Seminar
2004	Invited Participant and Report Author, U.S. D.O.D. Strategic
	Environmental Research Development Program Contaminated Sediments
	Workshop (www.serdp.org)
2003	Co-Editor of conference transactions, Gulf Coast Association of
	Geological Societies
2002-2004	Chair, DOCS Undergraduate Curriculum Committee
2002-2004	Co-instructor, with Harry Roberts, AAPG Modern Deltas Field Trip
2000-2002	Judge, Louisiana High School Science Fairs, Spring 2000, 2002, Judge at
	regional and state levels for Earth Science
1999-2002	Participant, NSF-Margins Source to Sink: Workshop participant, active in
	site-selection process and design of science plan

# Selected Media Activities Highlighting Research and Engagement

Sep 2018	Interview on LSU CSI and coastal land loss published in geoscience news
	magazine AAPG Explorer:
	https://explorer.aapg.org/story/articleid/49225/louisiana-coastal-loss-
	drives-environmental-disenfranchisement
Dec 2017	Interviewed by AGU TV for segment on Coastal Louisiana Land Loss
	https://www.youtube.com/watch?v=Gn9cYI5wv0Q
Aug 2017	Science Magazine Featured in an article on submarine landslides on the
	Mississippi River Delta Front:
	http://www.sciencemag.org/news/2017/08/germans-torpedoed-ship-
	during-world-war-ii-wreck-now-revealing-secrets-about-underwater
Feb 2017	Institut de Recherche pour le Développement (IRD) Featured in a video
	produced by the French agency to document an international expedition to
	study mangroves in New Caledonia.
	https://www.youtube.com/watch?v=TJBJmxhlIds
July 2016	American Association for the Advancement of Science (AAAS)
	highlighted LSU CSI collaborative paper on the Mississippi Delta:
	https://www.eurekalert.org/pub_releases/2016-07/lsu-nsc070616.php
Jan 2016	The Advocate Featured in article on new CSI/USGS paper on hurricanes
	and wetland sedimentation. Also featured in Louisiana Sportsman
	<i>Magazine</i> article on the same paper.
	http://www.theadvocate.com/baton_rouge/news/article_eaaba7e6-dc7a-
	52db-bbee-2285d16e9019.html

- Sept 2013 The Science Channel Featured in the show Strip the City New Orleans episode. Summary article: <a href="http://www.nola.com/tv/index.ssf/2014/02/strip\_the\_city\_from\_discovery.html">http://www.nola.com/tv/index.ssf/2014/02/strip\_the\_city\_from\_discovery.html</a>
   June 2013 NOLA.com Participated in the heated public discussion of diversion strategies for coastal restoration covered in this article: <a href="http://www.nola.com/environment/index.ssf/2013/06/st\_bernard\_and\_plaq\_uemines\_par.html#incart\_river">http://www.nola.com/environment/index.ssf/2013/06/st\_bernard\_and\_plaq\_uemines\_par.html#incart\_river</a>
   May 2013 Louisiana State House of Representatives Gave testimony on LSU coastal activities to the Natural Resources Committee. <a href="http://www.theadvocate.com/baton\_rouge/news/politics/legislature/article\_3050b4ec-633d-57c9-97c8-839c45e82cb4.html">http://www.theadvocate.com/baton\_rouge/news/politics/legislature/article\_3050b4ec-633d-57c9-97c8-839c45e82cb4.html</a>
- April 2013 *Houma Today* CSI reorganization led by Bentley featured in news article: <u>http://www.houmatoday.com/news/20130128/lsu-reorganizing-coastal-</u> <u>studies-institute</u>

# Published Reports, Books, and Book Chapters

(For recent and in-preparation publications, I have included a description of my role in the study.) <u>Underlined name indicates student author.</u>

- Bentley S. J., Xu K., Georgiou I. Y., Maloney J. (Baton Rouge, LA: Louisiana State University Coastal Studies Institute). 2022. *Mass wasting processes and products of the Mississippi delta front: data synthesis and observation: Final Project Report*. 158 p. New Orleans (LA): US Dept. of Interior, Bureau of Ocean Energy Management. Cooperative Agreement No.: M13AC00013. OCS Study BOEM 2022-007.
- Xu, Y. Jun, M. A. Allison, S. J. Bentley, A. L. Collins, W. D. Erskine, V. Golosov, A. Horowitz, 2014. *Sediment Dynamics from the Summit to the Sea*. IAHS Special Publication 367, IAHS, CEH Wallingford, Oxfordshire OX10 8BB, UK.
- SJ Bentley, AM Freeman, CS Willson, J Cable, and L Giosan, 2013, Using what we have: optimizing sediment management in Mississippi River Delta restoration to improve the economic viability of the Nation, John W. Day, G. Paul Kemp, Angelina M. Freeman, and David P. Muth, eds., Perspectives on the Restoration of the Mississippi Delta: The Once and Future Delta. 10.1007/978-94-017-8733-8\_6.
- Bentley, S.J., Freeman, A., Willson, C., and Cable, J., 2012, Sediment availability for Mississippi Delta Restoration: Implications for Policy Makers. In: (Mississippi River Delta Special Engineering and Science Team [SEST], eds), Answering Ten Fundamental Questions About the Mississippi River Delta. Baton Rouge, National Audubon Society, National Wildlife Federation, and Environmental Defense Fund.

http://www.mississippiriverdelta.org/files/2012/04/MississippiRiverDeltaReport.pdfp. 6-8. (This article is a laymen's language policy and science document intended to communicate policy-relevant science to government decision makers and other stakeholders. It is the synthesis of two years of work by the SEST team, funded by the publishing organizations.)

- Bentley, S.J., Cable, J., Willson, C., and Freeman, A., 2012, Scientific Feasibility of Sediment Diversions for Mississippi Delta Restoration: Implications for Policy Makers. In: (Mississippi River Delta Special Engineering and Science Team, eds), Answering Ten Fundamental Questions About the Mississippi River Delta. Baton Rouge, National Audubon Society, National Wildlife Federation, and Environmental Defense Fund. <u>http://www.mississippiriverdelta.org/files/2012/04/MississippiRiverDeltaReport.pdf</u>p. 9-12. (This article is a laymen's language policy and science document intended to communicate policy-relevant science to government decision makers and other stakeholders. It is the synthesis of two years of work by the SEST team, funded by the publishing organizations.)
- 6. Bentley, S.J., and <u>Baustian, M</u>, 2006, **Coastal Marine Geology: A Laboratory Manual**. Privately published for summer field course. 56 p.
- Bentley, S.J., Thibodeaux, L., et al., 2006, *Physical and Biological Processes* Associated with Contaminated Sediment Fate and Transport. In: Reible, D., and Lanczos, T., eds., Assessment and Remediation of Contaminated Aquatic Sediments. Elsevier NATO Science Series v. 73, p. 83-136.
- Swales, A., Bentley, S.J., McGlone, M.S., and Ovenden, R., 2005, *Pauatahanui Inlet:* effects of historical catchment landcover changes on inlet sedimentation. New Zealand National Institute of Water and Atmopheric Research Client Report HAM2004-149, 135 p.
- Ravens, T., and Bentley, S.J., 2004, *Sediment Stability*. In: (Leeson, A., ed.) Final Report: SERDP and ESTCP Expert Panel Workshop on Research and Development Needs for the In Situ Management of Contaminated Sediments. **Strategic** Environmental Research Development Program Report, p. 5-14. www.serdp.org.
- Bentley, Samuel J., 2003, Wave-Current Dispersal of Fine-Grained Fluvial Sediments Across Continental Shelves: The Significance of Hyperpychal Plumes. In E.D. Scott, A.H. Bouma and W.R. Bryant (Eds.) Siltstones, Mudstones and Shales: Depositional Processes and Characteristics, Society for Sedimentary Geology/Gulf Coast Association of Geological Societies Joint Publication, p. 35-48.
- 11. Reible, D., R. Jensen, S. Bentley, M. Dannel, J. DePinto, J. Dyer, K. Farley, M. Garcia, D. Glaser, J. Hamrick, W. Lick, R. Pastorok, R. Scher, K. Ziegler, 2002, *The Role of Modeling in Managing Contaminated Sediments*. In: Chien, C.C, M.A. Medina, G.F. Pinder, D.R Reible, B.E. Sleep, and C. Zheng, eds., Environmental Modeling and Management: Theory, Practice, and Future Directions. DuPont Company.
- Roberts, H.H., S. Bentley, J.M. Coleman, S.A. Hsu, O.K. Huh, <u>K. Rotondo</u>, M. Inoue, L.J. Rouse, Jr., A. Sheremet, G.W. Stone, N. Walker, S. Welsh, and W.J. Wiseman, Jr., 2003, *A new appraisal of Louisiana's sedimentary system from the Atchafalaya River to Chenier Plain coast.* Geoscience and Man, Geoscience Publications, LSU.

# **Refereed Articles in Serial Publications, Published or In Press**

Underlined name indicates student author at time of research

\* indicates corresponding author

- Xu, K., <u>Wang, J.</u>, Li, C., Bentley, S.J., and Miner, M.D., 2022, *Geomorphic and* hydrodynamic impacts on sediment transport on the inner Louisiana shelf. Geomorphology <u>https://doi.org/10.1016/j.geomorph.2021.108022</u>
- Liu, H., Xu, K., Wilson C., Bentley, S.J., <u>Xue, Z</u>., and Zhang, Z., 2022, Geomorphologic change and patchy mud infilling in a sandy dredge pit in eastern Ship Shoal, Louisiana shelf, USA. Geomorphology <u>https://doi.org/10.1016/j.geomorph.2021.107983</u>
- Xue, Z., Wilson, C.A., Xu K., Bentley, S.J., and Liu, H., 2022, Sandy Borrow Area Sedimentation—Characteristics and Processes Within South Pelto Dredge Pit on Ship Shoal, Louisiana Shelf, USA. Estuaries and Coasts https://doi.org/10.1007/s12237-021-00975-6
- 4. <u>Haddadian, S</u>, \*CE Ozdemir, BL Goodlow, G Xue, SJ Bentley, 2021, Direct Numerical Simulations of Miniature Along-Shelf Current-Supported Turbidity Currents: Conceptual Investigation of Velocity Structure and Drag Coefficient. Journal of Geophysical Research: Oceans, 126: 8, e2020JC016736
- \*DeLong, K. L., <u>Gonzalez, S., Obelcz, J. B., Truong, J. T</u>., Bentley, S. J. Sr, Xu, K., Reese, C. A., Harley, G. L., Caporaso, A., Shen, Z. & Middleton, B. A., 2021: Late Pleistocene baldcypress (Taxodium distichum) forest deposit on the continental shelf of the northern Gulf of Mexico. Boreas. https://doi.org/10.1111/bor.12524. ISSN 0300-9483.
- \*Mallarino, G., J Francis, S Jorry, J Daniell, A Droxler, G Dickens, SJ Bentley, 2021, <u>Timescale dependent sedimentary record during the past 130 kyr from a</u> <u>tropical mixed siliciclastic–carbonate shelf edge and slope: Ashmore Trough</u> (southern Gulf of Papua). Sedimentology, https://doi.org/10.1111/sed.12867
- Li, G., \*K Xu, ZG Xue, <u>H Liu</u>, SJ Bentley, 2021, Hydrodynamics and sediment dynamics in Barataria Bay, Louisiana, USA. Estuarine, Coastal and Shelf Science 249, 107090
- <u>Ou, Y</u>, \*ZG Xue, C Li, K Xu, JR White, SJ Bentley, Z Zang, 2020, <u>A numerical investigation of salinity variations in the Barataria Estuary, Louisiana in connection with the Mississippi River and restoration activities</u>. Estuarine, Coastal and Shelf Science, 2020
- 9. \*Zang, Z., ZG Xue, K Xu, SJ Bentley, Q Chen, EJ D'Sa, 2008, <u>The role of sediment-induced light attenuation on primary production during Hurricane Gustav (2008)</u>. Biogeosciences, 2020
- \*Zang, Z, ZG Xue, K Xu, CE Ozdemir, Q Chen, 2020, <u>A Numerical Investigation</u> of Wave-Supported Gravity Flow During Cold Fronts Over the Atchafalaya Shelf. Journal of Geophysical Research: Oceans, 2020
- <u>Robichaux, Patrick</u>, Kehui Xu, Samuel J Bentley, Michael Miner, Z George Xue, 2020, Morphological evolution of a mud-capped dredge pit on the Louisiana shelf: Nonlinear infilling and continuing consolidation. Geomorphology 354: 1, 107030, <u>https://doi.org/10.1016/j.geomorph.2019.107030</u>
- 12. <u>Huang, Wei</u>, Chunyan Li, John R White, Sibel Bargu, Brian Milan, Samuel J. Bentley, 2020, Numerical Experiments on variation of freshwater plume and

leakage effect from Mississippi River diversion in the Lake Pontchartrain Estuary. Journal of Geophysical Research Oceans, <u>https://doi.org/10.1029/2019JC015282</u>

- Maloney, Jillian, Samuel J. Bentley, Kehui Xu, Ioannis Y. Georgiou, Navid H. Jafari, Michael D. Miner, 2020, Mass wasting on the Mississippi River Subaqueous Delta. Earth Science Reviews, https://doi.org/10.1016/j.earscirev.2019.103001
- Chaytor, Jason D., Wayne E. Baldwin, Samuel J. Bentley, Melanie Damour, Douglas Jones, Jillian Maloney, Michael D. Miner, Jeff Obelcz and Kehui Xu, 2019, Short- and long-term movement of mudflows of the Mississippi River Delta Front and their known and potential impacts on oil and gas infrastructure. Geological Society, London, Special Publications, 500, <u>https://doi.org/10.1144/SP500-2019-183</u>
- 15. <u>Wang, Jiaze</u>, Kehui Xu, Samuel J Bentley, <u>Crawford White</u>, <u>Xukai Zhang</u>, <u>Haoran Liu</u>, 2019, Degradation of the Plaquemines sub-delta and relative sealevel in eastern Mississippi deltaic coast during the Late Holocene. Estuarine, Coastal and Shelf Science Volume 227, 31 October 2019, 106344
- 16. <u>Li, An</u>, Frank T.-C. Tsai, Kehui Xu, <u>Jiaze Wang</u>, <u>Crawford White</u>, Samuel J. Bentley, Qin J. Chen, 2019, Modeling sediment texture of river-deltaic wetlands in the Lower Barataria Bay and Lower Breton Sound, Louisiana, USA. Geo-Marine Letters https://doi.org/10.1007/s00367-019-00566
- 17. Xu, Kehui, Samuel Bentley, John Day, Angelina Freeman, 2019, A Review of Sediment Diversion in the Mississippi River Deltaic Plain. Estuarine, Coastal, and Shelf Processes, <u>https://doi.org/10.1016/j.ecss.2019.05.023</u>.
- Bomer, E.J., Bentley, S.J., <u>Crawford, F., Hughes, J.E.T.</u>, et al., 2019, Sediment Dynamics and Stratigraphic Evolution of Middle Barataria Bay and Middle Breton Sound, Louisiana, USA: Implications for the Implementation of River-Sediment Diversions. Estuarine, Coastal, and Shelf Science, https://doi.org/10.1016/j.ecss.2019.03.0.
- 19. Zang, Zhengchen, George Xue, Kehui Xu, Samuel J Bentley, Qin Chen, Eurico J D'Sa, Qian Ge, 2019, A Two Decadal (1993–2012) Numerical Assessment of Sediment Dynamics in the Northern Gulf of Mexico, Water https://doi.org/10.3390/w11050938
- <u>Denommee, K.D\*</u>., Harazim, D., and Bentley, S.J., 2019, Mud deposition and diagenesis within an Early Paleozoic clinothem: Power Steps Formation, Newfoundland, Canada. Geological Magazine, DOI: https://doi.org/10.1017/S0016756819000402
- 21. Reese, C.A.\*, Grant L. Harley, Kristine DeLong, Samuel J. Bentley, Kehui Xu, <u>Suyapa Gonzalez</u>, <u>Jonathan T. Truong</u>, <u>Jeffrey Obelcz</u>, Alicia Caporaiso, 2018, Stratigraphic pollen analysis performed on a Late-Pleistocene cypress forest preserved on the northern Gulf of Mexico continental shelf: paleoenvironmental implications. Journal of Quaternary Science 33 (8), 865-870.
- 22. <u>Wang, J</u>.\*, Xu, K., Restreppo, G.A., Bentley, S.J., Meng, X., and Zhang, X., 2018, *The coupling of bay hydrodynamics to sediment transport and microtidal wetlands stability under high rates of relative sea level rise*. Marine Geology https://doi.org/10.1016/j.margeo.2018.08.

- 23. <u>Restreppo, G</u>.\*, Bentley, S.J., Xu, K., and Wang, J., 2018, *Riverine Sediment Contribution to Distal Wetlands: Fourleague Bay, LA*. **Estuaries and Coasts**, doi.org/10.1007/s12237-018-0453-0.
- 24. <u>Obelcz, J\*</u>., Xu, K., Bentley, S.J., <u>O'Connor, M.</u> and Miner, M.D., 2018. *Mud-capped dredge pits: An experiment of opportunity for characterizing cohesive sediment transport and slope stability in the northern Gulf of Mexico*. Estuarine, Coastal and Shelf Science, <u>https://doi.org/10.1016/j.ecss.2018.04.039</u>
- 25. Wicks, C.M\*., <u>Paylor, R.L</u>. and Bentley, S.J., 2018. *Estimating surface/subsurface sediment mixing in karst settings using <sup>7</sup>Be isotopes*. Water Resources Research, https://doi.org/10.1002/2017WR022192
- 26. Maloney, J.M\*., S.J. Bentley, K. Xu, <u>J. Obelcz</u>, I.Y. Georgiou, M. Miner, 2018, *Mississippi River subaqueous delta is entering a stage of retrogradation*. Invited research article, **Marine Geology** <u>https://doi.org/10.1016/j.margeo.2018.03.001</u>.
- <u>Sha, X</u>.\*, Xu, K., Bentley, S.J., and Robichaux, P.A., 2018, *Characterization and modeling of sediment settling, consolidation, and suspension to optimize coastal Louisiana restoration*. Estuarine Coastal and Shelf Sciences, <u>https://doi.org/10.1016/j.ecss.2018.02.0</u>.
- 28. <u>Thomas, M.L\*</u>., Warny, S., Jarzen, D.M., Bentley, S.J., Droxler, A.W., Harper, B.B., Nittrouer, C.A. and Xu, K., 2018. Palynomorph evidence for tropical climate stability in the Gulf of Papua, Papua New Guinea, over the latest marine transgression and highstand (14,500 years BP to today). **Quaternary** International. https://doi.org/10.1016/j.quaint.2017.12.035
- 29. <u>Gonzalez, S\*</u>., Samuel J. Bentley, Kristine DeLong, Kehui Xu, <u>Jeffrey Obelcz</u>, <u>Truong Johnathon</u>, Grant Harley, Reese Carl A., Alicia Caporaso, 2017, Facies reconstruction of a late Pleistocene cypress forest discovered on the northern Gulf of Mexico continental shelf, **Gulf Coast Association of Geological Societies Transactions**, v. 67, p. 133-146.
- <u>Denommee, K.C</u>.\*, Bentley, S.J. & Harazim, D. Geo-Marine Letters (2017) Mechanisms of muddy clinothem progradation on the Southwest Louisiana Chenier Plain inner shelf. https://doi.org/10.1007/s00367-017-0525-3
- 31. Obelcz, J.\*, Xu, K., Georgiou, I.Y., Maloney, J., Bentley, S.J. and Miner, M.D., 2017. Sub-decadal submarine landslides are important drivers of deltaic sediment flux: Insights from the Mississippi River Delta Front. Geology (2017) 45 (8): 703-706. DOI:https://doi.org/10.1130/G38688.1.
- 32. <u>Septama, Erlangga\*</u>, Bentley, Samuel J., 2017, Source-to-sink sediment delivery in the Gulf of Papua from SEM-MLA-aided provenance analysis of deep-sea turbidite sands, **AAPG Bulletin** DOI:10.1306/09021615184, p. 907-936.
- 33. <u>Keller, G.</u>, Bentley, S.J\*., Xu, K., Maloney, J., Miner, M., Georgiou, I., 2016, River-plume sedimentation and 210Pb/7Be seabed delivery on the Mississippi River delta front. Geo-Marine Letters doi:10.1007/s00367-016-0476-0.
- <u>Denommee, KC.</u>\*, Bentley, SJ, Harazim, D., Macquaker, JHS, 2016, Hydrodynamic controls on muddy sedimentary-fabric development on the Southwest Louisiana subaqueous delta. Marine Geology, http://dx.doi.org/10.1016/j.margeo.2016.
- 35. Twilley, R. R.\*, Bentley, S.J., Chen, Q.J., Edmonds, D.A., Hagen, S.C., Lam, N.S.L., et al., 2016, Co-evolution of wetland landscapes, flooding, and human

settlement in the Mississippi River Delta Plain. **Sustainability Science** DOI: 10.1007/s11625-016-0374-4.

- 36. <u>Septama, E</u>\*., and Bentley, SJ., 2016, Late Quaternary geomorphology, seabed evolution, and terrigenous sediment delivery to the Pandora and Moreseby Troughs, Gulf of Papua. **Marine Geology** doi:10.1016/j.margeo.2016.06.004.
- Septama, E\*., and Bentley, SJ., 2016, Conduits, Timing, and Processes of Sediment Delivery across a high-relief continental margin: Continental Shelf to Basin in the Late Quaternary Gulf of Papua. Marine and Petroleum Geology 72: 447-462, doi:10.1016/j.marpetgeo.2016.02.009.
- Xu, K.\*, Bentley, S.J., <u>Robichaux, P.</u>, <u>Sha, X.</u>, and <u>Yang, H.</u>, 2016, Implications of texture and erodibility for sediment retention in receiving basins of Coastal Louisiana diversions. **Water** 2016, 8(1), 26; doi: 10.3390/w8010026.
- Johnson, C\*., Chen, Q.J., Karimpour, A., Bentley, S.J., White, C., Xu, K., and Wang, J., 2015, Geological and Geotechnical Characterization of Coastal Marshes in the Mississippi River Delta. In The Proceedings of the Coastal Sediments 2015.
- 40. <u>Smith, JE</u>, Bentley, SJ\*, Snedden, G., and White, C, 2015, What role to hurricanes play in sediment delivery to subsiding river deltas? **Scientific Reports** DOI: 10.1038/srep17582.
- 41. Bentley, SJ\*, Blum, MD, Maloney, J, Pond, LG, and Paulsell, RL, 2016, The Mississippi River Source to Sink System: Perspectives on Tectonic, Climatic, and Anthropogenic Influences, Miocene to Anthropocene. **Earth Science Reviews** doi:10.1016/j.earscirev.2015.11.001.
- 42. Swales, A.\*, Bentley, S.J., and Lovelock, C, 2015, Mangrove-forest evolution in a sediment-rich estuarine system: Opportunists or agents of geomorphic change? Firth of Thames, New Zealand. Earth Surface Processes and Landforms, DOI: 10.1002/esp.3759.
- <u>Thomas, ML</u>\*, Pocknall, DT, Warny, S, Bentley, SJ, Droxer, AW, and Nittrouer, CA, 2015, Assessing depth and distance from shore and shelf-slope break through palynomaceral analysis: A modern case study from the Gulf of Papua. Palynology DOI: 10.1080/01916122.2015.1014526.
- 44. <u>Smith, M</u>., and Bentley, SJ Sr.\*, 2014, Sediment capture in floodplains of the Mississippi River: a case study in Cat Island National Wildlife Refuge, Louisiana. In: Sediment Dynamics from the Summit to the Sea (IAHS Publ. 367, p. 442-446, 2014).
- 45. <u>Lo, E.L.</u>, Bentley, SJ Sr\*., and Xu, K, 2014, Experimental study of cohesive sediment consolidation and resuspension identifies approaches for coastal restoration: Lake Lery, Louisiana. **Geo-Marine Letters** 10.1007/s00367-014-0381-3.
- 46. <u>Howell, AL.</u>, Bentley, S.J.\*, Xu, K, Ferrell, R.E., <u>Muhammad, Z</u>, and <u>Septama, E</u>, 2014, *A clay mineral provenance study of the Northern Pandora Trough Continental Margin, Papua New Guinea*. Marine Geology <u>DOI:</u> 10.1016/j.margeo.2014.08.003. (Howell was my MS student, and this work grew out of the 2004 NSF-S2S project with myself, Droxler, Peterson, Dickens, and others.)
- 47. Bentley, S.J.\*, Swales, A., Pyenson, B, and Dawe, J., 2014. Sedimentation,

bioturbation, and sedimentary fabric evolution on a Modern mesotidal mudflat: a multi-tracer study of processes, rates, and scales. **Estuarine, Coastal, and Shelf Science** http://dx.doi.org/10.1016/j.ecss.2014.02.004.

- <u>Denommee, K.C.\*</u>, Bentley, S.J. & Droxler, A.W., 2014. Climatic controls on hurricane patterns: a 1200-y near-annual record from Lighthouse Reef, Belize. Sci. Rep.4, 3876; DOI:10.1038/srep03876 (2014). (published by **Nature Publishing Group**). (MS work of K. Denommee, who did her MS and PhD with me.)
- 49. <u>Denommee, K.C\*.</u>, and Bentley, S.J., 2013, *Clinoform mechanics on the Southwest Louisiana Continental Shelf*, **Gulf Coast Association of Geological Societies Transactions**, 63: 205-212.
- 50. <u>Salcedo-Castro\*, J</u>., Bourgault, D., Bentley, S.J., and deYoung, B., 2013, *Non-hydrostatic modeling of cohesive sediment transport associated with a subglacial buoyant jet in glacial fjords: a process-oriented approach*. Ocean Modeling <u>http://dx.doi.org/10.1016/j.ocemod.2012.12.005</u>. (I was on Salcedo's doctoral advisory committee and helped him formulate the cohesive sediment algorithms used for his model.)
- 51. <u>Huelse\*, P</u>., and Bentley, S.J., 2012, A Pb-210 sediment budget and granulometric proxy record of sediment fluxes in a sub-Arctic deltaic system: the Great Whale River, SE-Hudson Bay, Canada. Estuarine, Coastal, and Shelf Science 109: 41-52. (Huelse was my PhD student.)
- 52. Bentley\*, S.J., and <u>Kahlmeyer, E</u>., 2012, Patterns and mechanisms of fluvial sediment flux and accumulation in two sub-arctic fjords: Nachvak and Saglek fjords, Nunatsiavut, Canada. Canadian Journal of Earth Sciences, 49: 1-16, doi:10.1139/E2012-052. (Kahlmeyer was my MS student.)
- 53. Bentley\*, S.J., and Nittrouer, C.A., 2012, *Accumulation and intense bioturbation of carbonate muds along a platform margin: Dry Tortugas, Florida*. Marine Geology 315-318: 44-57.
- 54. Keen\*, T.R., Slingerland, R., Bentley, S.J., Furukawa, Y., Teague, W.J., and Dykes, J.D., 2012, Sediment transport on continental shelves: storm bed formation and preservation in heterogeneous sediments. In: Li, M., Sherwood, C., and Hill, P., eds., Continental Shelf Sedimentation, IAS Special Publication 44, p. 295-310. (My role in this paper was to write a section on observations and models of bed preservation of hurricane event layers, using hurricanes Katrina and Rita as examples.)
- 55. Macquaker\*, J., Bentley, S.J., and Bohacs, K., 2010, *Wave enhanced sediment*gravity flows and the dispersal of mud across continental shelves: a reappraisal of physical sedimentary processes operating in distal, "low energy" settings and their stratal record. **Geology** 38: 947-950 (My role in this paper was to describe hydrodynamic theory, develop a likely depositional model for WESGFs, and demonstrate with a recent field example.)
- 56. <u>Baustian, M.M.</u>\*, Bentley, S.J., and Wandersee, J.H. 2008, *Innovative assessment tools for a short, fast-paced summer field course*. Journal of College Science Teaching 37: 37-43. (This paper was based on a summer field course I taught with NSF-CAREER support at LUMCON.)

- 57. <u>Muhammad\*, Z</u>., Bentley, S.J., et al., 2008, Excess <sup>210</sup>Pb inventories and fluxes along the continental slope and basins of the Gulf of Papua. Journal of Geophysical Research-Earth Surface doi: 10.1029/2006JF000676 (This paper was written by my LSU-DOCS PhD student, funded by NSF-MARGINS S2S support.)
- 58. <u>Febo\*, L</u>., Bentley, S.J., et al., 2008, Late Pleistocene to Recent Sedimentation, Organic Carbon Delivery, and Paleoclimatic Inferences in the Northern Pandora Trough, Gulf of Papua, Papua New Guinea. Journal of Geophysical Research-Earth Surface, doi:10.1029/2006JF000677. (This paper was written by my cosupervised LSU-G&G PhD student, funded by NSF-MARGINS S2S support.)
- 59. <u>Carson\*, B.</u>, Droxler, A.W., Dickens, G., S. Bentley, et el., 2008, *Glacial-to-interglacial foraminiferal populations of the Southern Ashmore Trough (Gulf of Papua) mixed siliciclastic-carbonate system.* Journal of Geophysical Research-Earth Surface doi:10.1029/2006JF000629. (I was co-PI on this NSF-S2S project, and responsible for all MSCL core analyses, and involved in all stages of manuscript editing.)
- 60. <u>Francis\*, J.</u>, Francis, G., Droxler, A.W., Bentley, S.J., et al., 2008, *Deep water geomorphology of the mixed siliciclastic-carbonate system, Gulf of Papua*, Journal of Geophysical Research-Earth Surface doi:10.1029/2007JF000851. (I was co-PI on this NSF-S2S project, and responsible for all MSCL core analyses, and involved in all stages of manuscript editing.)
- 61. Swales\*, A., and Bentley, S.J., 2008, *Recent tidal-flat evolution and mangrove-habitat expansion: application of radioisotope dating to environmental reconstruction*. In: Schmidt, J., Cochrane, T., et al., eds, **Sediment Dynamics in Changing Environments, IAHS Special Publication** 325, p. 76-84. (This paper is based on field work conducted in New Zealand in 2006 during my stay there as a Visiting Scientist.)
- 62. <u>Tcherepanov\*, E. N.</u>, A. W. Droxler, P. Lapointe, G. R. Dickens, S. J. Bentley, et. al., 2008, *Neogene evolution of the mixed carbonate-siliciclastic system in the Gulf of Papua, Papua New Guinea*, **Journal of Geophysical Research**, 113, F01S21, doi:10.1029/2006JF000684 (I was co-PI on this NSF-S2S project, and responsible for all MSCL core analyses, and involved in all stages of manuscript editing.)
- 63. Jorry\*, S. J., A. W. Droxler, G. Mallarino, G. R. Dickens, S. J. Bentley, et. al., 2008, Bundled turbidite deposition in the central Pandora Trough (Gulf of Papua) since last glacial maximum, Journal of Geophysical Research, 113, F01S19, doi:10.1029/2006JF000649 (I was co-PI on this NSF-S2S project, and responsible for all MSCL core analyses, and involved in all stages of manuscript editing.)
- 64. <u>Baustian, M.M.</u> and Bentley, S.J., 2008, *Innovative assessment tools for a short, fast-paced summer field course*. **Journal of College Science Teaching** 37: 37-43.
- 65. <u>Andrus\*, M.</u>, and Bentley, S.J., 2007, *Sediment flux and fate in the Mississippi River Diversion at West Bay.* **ASCE: Coastal Sediments 2007**, p. 722-735. (Andrus was my MS student and is now doing a PhD with me.)
- 66. Swales\*, A., Bentley, S.J., Lovelock, C., and Bell, R., 2007, Sediment processes and mangrove habitat expansion on a rapidly prograding muddy coast, New

*Zealand*. **ASCE: Coastal Sediments 2007**, p. 1441-1444. (My role in this paper was to analyze and model radiochemical data used for the age model.)

- 67. Wheatcroft\*, R.A., Wiberg, P.W., Alexander, C., Bentley, S.J., Drake, D., and Borgeld, J., 2007, *Post Depositional Alteration and Preservation of Strata*, In: Nittrouer et. al. (Eds.), Continental-Margin Sedimentation: Transport to Sequence, IAS Special Publication, Blackwell, p. 101-148. For this paper I wrote a section on bed preservation, and also provided and interpreted radiochemical and core-image data.)
- 68. Bentley\*, S.J., Sheremet, A., and Jaeger, J.M., 2006, *Preservation potential of event layers on continental shelves: a model and observations*. Continental Shelf Research 26: 2108-2124.
- Keen\*, T. R., Y. Furukawa, S. J. Bentley, R. L. Slingerland, W. J. Teague, J. D. Dykes, and C. D. Rowley (2006), *Geological and oceanographic perspectives on event bed formation during Hurricane Katrina*, Geophysical Research Letters, 33, L23614, doi:10.1029/2006GL027981.For this paper I provided observations and interpretations of cores collected Katrina.
- 70. Brunner\*, C., <u>Beall, J.</u>, Bentley, S.J., and Furukawa, Y., 2005, *Hypoxia hotspots in the Mississippi Bight*. Journal of Foraminiferal Research 36: 95-107. (For this paper, I provided radiochemical age models and also estimates of mixing rates, to help constrain temporal resolution of cores studied.)
- 71. Patterson\*, W.F., Wilson, C.A., Bentley, S.J., Cowan, J.H., Allen, Y.C., and <u>Dufrene, T.A.</u>, 2005, *Delineating juvenile red snapper habitat in the northern Gulf of Mexico*. American Fisheries Society Symposium 41, 277-288. (I was responsible for core and sonar collection and analysis for this study of fish habitat.)
- 72. <u>Rotondo\*, K.A.</u>, and Bentley, S.J., 2004, *Marine dispersal of fluvial sediments as fluid muds: old concept, new significance*. In: E.D. Scott and A. H. Bouma, **Depositional Processes and Reservoir Characteristics of Siltstones, Mudstones, and Shales, Society for Sedimentary Geology Miscellaneous Publication**, p. 24-49.
- 73. Fan\*, S., Swift, D.J.P., Traykovski, P., Bentley, S.J., Borgeld, J., and Niedoroda, A.W., 2004, *River flooding, storm resuspension, and event stratigraphy on the northern California shelf: observations compared with simulations*. Marine Geology 210: 17-43.
- 74. Keen\*, T.R., Bentley, S.J., Vaughan, W.C., and Blain, C.A., 2004, *The generation and preservation of multiple hurricane event beds in the northern Gulf of Mexico*. Marine Geology 210: 79-105.
- 75. Bentley\*, S.J., and Nittrouer, C.A., 2003, *Emplacement, modification, and preservation of event strata on a flood-dominated continental shelf: Eel Shelf, northern California.* Continental Shelf Research 23: 1465-1493.
- 76. Bentley\*, S.J., and Sheremet, A., 2003, *A new model for the emplacement, bioturbation, and preservation of sedimentary strata*. **Geology** v. 31, no. 8, p. 725-728.
- 77. Bentley\*, S.J., Roberts, H., and <u>Rotondo, K.A.</u>, 2003, *The sedimentology of muddy coastal systems: research perspectives and new insights from the Coastal*

*Studies Institute*. **Gulf Coast Association of Geological Societies Transactions** v. 53, p. 52-63.

- Bentley, S. J\*., <u>Rotondo, K</u>., Roberts, H. H., Stone, G. W., & Huh, O. K., 2003. *Transport and accumulation of cohesive fluvial sediments on the inner shelf: From the Atchafalaya River downdrift to the Louisiana Chenier Plain.* **Proceedings of the International Conference on Coastal Sediments 2003**.
- 79. <u>Dufrene\*, T.A.</u>, Bentley, S.J., and Allen, Y.C., 2003, *Geologic and geoacoustic study of surficial deposits, north-central Gulf of Mexico continental shelf.* **Gulf Coast Association of Geological Societies Transactions** 53: 210-216.
- <u>Velardo\*</u>, <u>B.M</u>., and S.J. Bentley, 2003, *Impacts of tropical systems on the sedimentary fabric of the Mississippi Sound*. Gulf Coast Association of Geological Societies 53: 815-823.
- <u>Febo\*, L.A., Dufrene, T. A.</u>, and Bentley, S.J., Event sedimentation and long-term accumulation in a salt marsh: St. Louis Bay, Mississippi, northern Gulf of Mexico. Gulf Coast Association of Geological Societies Transactions 53: 217-226.
- 82. <u>Patterson\*, Luke J.</u>, <u>Muhammad, Zahid</u>, and Bentley, Samuel J, Britsch, L. Del and Dillon, Douglas L., 2003, <sup>210</sup>Pb and <sup>137</sup>Cs geochronology of the Lake Fausse Pointe region of the Lower Atchafalaya Basin. Gulf Coast Association of Geological Societies Transactions 668-675.
- 83. <u>Rotondo\*, K.A.</u>, and Bentley, S.J., 2003, *Deposition and resuspension of fluid muds on the western Louisiana inner continental shelf.* **Gulf Coast Association of Geological Societies Transactions** 53: 722-731.
- 84. Bentley\*, S.J., Keen, T., Blain, C.A., Vaughan, W.C., 2002, *The origin and preservation of a major hurricane event bed in the northern Gulf of Mexico: Hurricane Camille, 1969.* Marine Geology 186: 429-452.
- 85. Bentley\*, S.J., 2002, *Dispersal of fine sediments from river to shelf: process and product*. Gulf Coast Association of Geological Societies Transactions v. 52, p. 1055-1067.
- 86. Roberts\*, H.H., S. Bentley, J.M. Coleman, S.A. Hsu, O.K. Huh, <u>K. Rotondo</u>, M. Inoue, L.J. Rouse, Jr., A. Sheremet, G. Stone, N. Walker, S. Welsh, and W.J. Wiseman, Jr., 2002, *Geological framework and sedimentology of recent mud deposition on the eastern Chenier Plain coast and adjacent inner shelf, western Louisiana*. Gulf Coast Association of Geological Societies Transactions, v. 52, p. 849-859.
- Richardson\* M.D., K.B. Briggs, S.J. Bentley, D.J. Walter, and T.H. Orsi, 2001, *The effects of biological and hydrodynamic processes on physical and acoustic properties of sediments off the Eel River, California*. Marine Geology 182:121-139.
- 88. Furukawa\*, Y., S.J. Bentley, and D. Lavoie, 2001, *Dynamic bioirrigation* modeling in experimental benthic mesocosms: Effects of infauna metabolism and dissolved oxygen transport. Journal of Marine Research 59:3.
- 89. Bentley\*, S.J., Y. Furukawa, and W.C. Vaughan, 2000, *Record of event* sedimentation in Mississippi Sound. Transactions of the Gulf Coast Association of Geological Societies 617-625.

- 90. Furukawa\*, Y., S.J. Bentley, A. Shiller, D. Lavoie, and P. Van Cappellen, 2000, Early diagenesis driven by biologically enhance oxygen flux in North Key Harbor, Dry Tortugas National Park, Florida. Journal of Marine Research 58: 493-522.
- 91. Bentley\* S.J. and Nittrouer C.A., 1999, *Physical and biological influences on the formation of sedimentary fabric in a fjord-like depositional environment: Eckernförde Bay, southwestern Baltic Sea*. **Palaios**, v. 16: 469-485.
- 92. Bentley\*, S.J., and Nittrouer, C.A., 1997, *Environmental influences on the formation of sedimentary fabric in a fine-grained carbonate-shelf environment: Dry Tortugas, Florida Keys.* **Geo-Marine Letters** 17:268-275.
- 93. Bentley\* S.J., Nittrouer C.A., and Sommerfield C.K., 1996, *Development of sedimentary strata in Eckernförde Bay, southwestern Baltic Sea.* Geo-Marine Letters 16: 148-154.

# **Invited Presentations**

Speaker, East China Normal University, Oct. 2018, World Deltas
Symposium, Shanghai, China
Speaker, Dauphin Island Sea Lab, Invited seminar, November 2018,
Dauphin Island, Alabama
Speaker, University of Southern Mississippi Invited Seminar, May 2018,
Stennis Space Center, Mississippi
Speaker, International Association for Hydro-Environment Engineering
and Research, Annual Conference, Aug 2017, Kuala Lumpur, Malaysia
Speaker, Acoustical Society of America, National Meeting, Dec 2017,
New Orleans
Speaker, American Geophysical Union Fall Meeting, Special Session on
Cohesive Sediment Transport, Dec 2016, San Francisco
Speaker and Review Panelist, East China Normal University, Oct 2016,
Shanghai, China
Speaker and Guest Educator, Terrebonne Parish Indian Education Youth
Leadership Workshop
Speaker, Tulane University Department of Earth Sciences, Nov 2015,
New Orleans
Erudite Fellow/Visiting Scholar, Cochin University of Science and
Technology, Sept 2015, Kochi, India
Speaker, Naval Research Laboratory Cohesive Sediments Meeting, July
2015, Senigallia, Italy
Speaker, International Deltas Meeting, July 2014, Istomino, Russia
Speaker, Coalition to Restore Coastal Louisiana, Executive Board
Meeting, July 2013, Baton Rouge, LA
<b>Panelist</b> , St. Bernard and Plaquemines Parish Public Forum on River
Diversions, Louisiana State Coastal Protection and Restoration Authority,
June 17, Chalmette, LA

2013	Speaker, Louisiana Governor's Advisory Commission on Coastal Affairs,
	June 6, Baton Rouge, LA. Invited presentation on river-sediment diversions for coastal restoration
2012	
2013	Speaker, Louisiana Senate, Natural Resources Committee, May 2013,
	Baton Rouge, LA. Invited testimony on river-sediment diversions for
2012	coastal restoration
2013	Speaker, Louisiana House of Representatives, Natural Resources
	Committee, May 2016, Baton Rouge, LA. Invited testimony on river-
	sediment diversions for coastal restoration
2013	Workshop Leader, Community Surface Dynamics Modeling System
	(CSDMS) Annual Meeting, Mar 2013, Boulder, CO. Workshop Leader
	and coordination of CSDMS Strategic Plan for Education and Knowledge
	Transfer Working Group of CSDMS ( <u>www.csdms.colorado.edu</u> )
2012	Instructor, ASCE Coasts, Oceans, Ports, and Rivers Institute (ASCE's
	Continuing Education program), July 2012 Baton Rouge, LA
2011-2016	Guest Lecturer, Williams College-Mystic Seaport Maritime Studies
	Program, Mississippi Delta Field Seminar, Spring and Fall semesters,
	Cocodrie, LA
2010	Speaker, AAPG Mudstones Session, Apr 2010, New Orleans
2006	Speaker, NSF Margins TEI: Telecommunications from Source to Sink,
	Gisborne, New Zealand
2004	Participant and Report Author, U.S. D.O.D. Strategic Environmental
	Research Development Program Contaminated Sediments Workshop,
	Washington D.C. (www.serdp.org)

# **Conference Presentations**

Underline indicates student researcher

- Liu, H., K. Xu, S. J. Bentley, C. Wilson, Z. Xue, and M. D. Miner, 2018, Sediment transport and geomorphologic response in multiple dredge pits near Ship Shoal of coastal Louisiana. American Geophysical Union Fall Meeting, Washington DC, December 2018
- <u>Myers, R</u>., S. J. Bentley, and A. Swales, 2018, Sediment Accumulation and Bioturbation in a tropical-carbonate mangrove forest on a Pacific atoll: Ouvéa, New Caledonia. **American Geophysical Union Fall Meeting,** Washington DC, December 2018
- Twilley, R., S. J. Bentley, S. C. Hagen, D. A. Edmonds, K. Xu, N. Lam, and Q. J. Chen, 2018, DELTA SEES: Sustainability of Deltaic Coastlines. American Geophysical Union Fall Meeting, Washington DC, December 2018
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- <u>Febo, L. A., Dufrene, T. A., Caudill, M. C., Peabody, M. B.</u>, and Bentley, S. J., 2003, *Event sedimentation and long-term accumulation in a salt marsh: St. Louis Bay, Mississippi*. Paper 7-9, South-Central Section (37th) and Southeastern Section (52nd), **GSA Joint Annual Meeting,** March 12–14, 2003 (Talk.)
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- Bentley, S.J., and Sheremet, A., 2002, A new quantitative model for the emplacement, bioturbation, and preservation of fine-scaled strata. AGU/ASLO Ocean Sciences meeting, Honolulu, Hawaii, February 2002 (Talk.)
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- Bentley, S.J., 2001, *Building the Sediment Record: Modeling physical and biological* processes of stratal formation. AGU Chapman Conference on Strata Formation on Margins, Ponce, Puerto Rico, June 2001 (Talk.)
- Keen, T. S.J. Bentley, C.A. Blain, and J. Barnes, 2001, Preservation potential of hurricane signatures in Mississippi Bight: Observations and model hindcasts.
   American Geophysical Union Spring Meeting, Boston, MA, May 2001 (Talk.)
- Fan, S., D.J.P. Swift, R. Clayton, and S.J. Bentley, 2001, Event stratigraphy on the northern California continental shelf: Role of high and low concentration suspensions. American Geophysical Union Spring Meeting, Boston, MA, May 2001 (Talk.)
- Bentley, S.J., and T. Keen, 2000, *Preservation potential of event layers: Observations of hurricane sedimentation in the northern Gulf of Mexico*. Geological Society of America Fall Meeting, Reno, NV, Nov 2000 (Talk.)
- Keen, T., and S.J. Bentley, 2000, The generation of event layers: Numerical modeling of hurricane sedimentation in the northern Gulf of Mexico. Geological Society of America Fall Meeting, Reno, NV, Nov 2000 (Talk.)
- Bentley, S.J., Y. Furukawa, and W.C. Vaughan, 2000, Record of event sedimentation in Mississippi Sound. Gulf Coast Association of Geological Societies Annual Meeting, Houston, TX, Nov 2000 (Poster.)
- Bentley, S.J., and Richardson, M.D., 2000, *Biogenic influences on sediment porosity and shear strength: Long-term mesocosm study*. EOS 80:14. 2000 Ocean Sciences Meeting, San Antonio, TX (Presented paper.)
- Furukawa, Y., and Bentley, S.J., 2000, *Quantitative modeling of bioirrigation in benthic mesocosms*. EOS 80: 15. 2000 Ocean Sciences Meeting, San Antonio, TX (Co-author on presented paper.)
- Furukawa, Y., and Bentley, S.J., 1999, *Quantitative modeling of bioirrigation in benthic mesocosms*. Gordon Conference on Chemical Oceanography, August 20-22, 1999 (Co-author on presented paper.)
- Bentley, S.J., 1999, Animal-sediment interactions, modern and ancient: New travel on old roads. Geological Society of America, Southeastern Section Annual Meeting, April 15-17, Athens, GA (Presented invited paper.)
- Bentley, S.J., Richardson, M.D., and Briggs, K.B., 1999, Biological influences on physical properties of the shallow seabed: Preliminary results from mesocosm experiments. Mississippi Academy of Sciences Annual Meeting, Feb. 26-28, Tupelo, MS. (Presented paper.)
- Bentley, S.J., Richardson, M.D., and Furukawa, Y., 1999, *Particle and fluid transport by a mud-dwelling Acorn Worm (Enteropneusta)*. **Gulf Coast Geochemistry Conference**, Jan. 29-30, Cocodrie, LA (Presented paper.)
- Bentley, S.J., Nittrouer, C.A., Lopez, G.R., and Aller, R.C., 1998, Bioturbation of sedimentary event layers: Observations and models for three contrasting shelf settings. Proceedings, Organism-Sediment Interactions Workshop, University of South Carolina Marine Laboratory, September 25-27, 1998 (Presented paper.)
- Briggs, K.B., Bentley, S.J., Richardson, M.D., and Young, D.K., 1998, Alteration of sediment porosity profiles by benthic invertebrate activity. Proceedings, Organism-

Sediment Interactions Workshop, University of South Carolina Marine Laboratory, September 25-27, 1998 (Co-author on presented paper.)

- Bentley, S.J., and Nittrouer, C.A., 1998, Microfabric study of event-layer preservation in modern and ancient sediments: Eel River shelf and the Rio Dell formation, northern California. AGU/ASLO Ocean Sciences Meeting, San Diego, CA, Feb 1998, Eos 79:OS34 (Presented paper.)
- Briggs, K., Richardson, M.D., and Bentley, S.J., 1998, Permeability of successive flood deposits off the Eel River, northern California: Effects of bioturbation. AGU/ASLO Ocean Sciences Meeting, San Diego, CA, February 1998, Eos 79:OS34 (Co-author on presented paper.)
- Bentley, S.J., and Nittrouer, C.A., 1997, *The fate of Halimeda-rich sediments in a carbonate-mud depositional environment: Dry Tortugas, Florida*. Geological Society of America Annual Meeting, Salt Lake City, October 20 1997 (Presented paper.)
- Bentley, S.J., and Nittrouer, C.A., 1996, Constraints on rates of sediment mixing and accumulation, Southeast Channel, Dry Tortugas. Proceedings of CBBL/NRL Key West Campaign Workshop, Feb 1997, Stennis Space Center, MS. Dawn Lavoie, editor (Presented paper.)
- Bentley, S.J., and Nittrouer, C.A., 1996, *Time-series microfabric study of an event layer: The 1995 flood deposit on the Eel River shelf.* **1996 AGU Fall Meeting**, Eos 77: F331 (Presented paper.)
- Bentley, S.J., Nittrouer, C.A., and Lopez, G.R., 1995, Measurement of progressive bioturbation in event layers: Eckernförde Bay. Proceedings, CBBL/NRL Workshop on Modeling Methane-rich Sediments of Eckernförde Bay, Eckernförde, Germany, July 1995; Thomas Wever, editor (Presented paper.)
- Nittrouer, C.A., Sommerfield, C.K., and Bentley, S.J., 1994, *Formation of sedimentary strata in Eckernförde Bay.* **1994 Ocean Sciences Meeting**, Eos 75: 180 (Co-author on presented paper.)

#### **Professional Affiliations**

Council of Colleges of Arts & Sciences American Association for the Advancement of Science American Geophysical Union Society for Sedimentary Geology

#### **Grant Activities**

[Bracketed percent indicates funding share to Bentley]

# <u>Total funding to Bentley at LSU 2011-2022 as PI or Senior coPI:</u> <u>approximately \$23,389,689; \$ credit \$5,645,072</u>

Proposals funded at Louisiana State University (LSU), 2011-2022:

- Principal Investigators: Bob Fudickar, Frederick Ostrenko, Greg Trahan, Samuel Bentley, Proposal Title: *Digital Twin: Building next-generation visualization talent and technology for NASA manufacturing*. Funding Agency: NASA. Funding Level \$5,000,000[10%]. Duration: 2022-2024.
- Principal Investigators: Samuel Bentley, Proposal Title: EDA Build Back Better Regional Challenge Subaward - H2theFuture: A Transformative Energy Cluster Strategy to Decarbonize the South Louisiana Industrial Corridor. Funding Agency: Greater New Orleans Development Foundation. Funding Level \$35,000 [100%]. Duration: 2021-2022.
- Principal Investigators: Samuel Bentley, Kevin Xu. Proposal Title: Louisiana Sediment Management Plan (LASMP): Central Coast Regional Sediment Inventory and Sediment Budget Program. Funding Agency: The Water Institute of the Gulf. Funding Level \$85,000[50%]. Duration: 2022-2024.
- Principal Investigators: Samuel Bentley, Traci Birch, Marcio de Quieroz, et al., Proposal Title: *IUCRC Planning Grant Louisiana State University: Center for Coastal Deltaic Innovation, Research, & Technology (CDIRT)*. Funding Agency: National Science Foundation. Funding Level \$20,000 [25%]. Duration: 2021-2022.
- Principal Investigators: Samuel Bentley, Cynthia Peterson, Dongmei Cao et al. et al., Funding Agency: US Army. Funding Level \$10,000,000 [20%]. Duration: 2020-2023.
- Principal Investigators: Cynthia Peterson, Zakiya Wilson Kennedy, Stacia Haynie, Samuel Bentley. Proposal Title: LSU ADVANCE Catalyst. Funding Agency: National Science Foundation. Funding Level \$300,000 [ 20%]. Duration: 2022-2020-2023.
- Principal Investigators: Samuel Bentley, Kevin Xu, and Matthew Hiatt. Proposal Title: 2019 Survey of the Mississippi River Near the Middle Breton Diversion Location.
  Funding Agency: Louisiana Coastal Protection and Restoration Authority, via Tulane University Subaward. Funding Level: \$651,327 [33%]. Duration: 2019-2020.
- Principal Investigators: Kevin Xu, Samuel Bentley, Yanxia Ma, George Xue. Proposal Title: Enhancing Sediment Retention Rates of Receiving Basins of Louisiana Sediment Diversions. Funding Agency: Louisiana Center of Excellence, through The Water Institute of Gulf. Funding level: **\$292,495 [40%].** Duration: 2017-2019.
- Principal Investigators: Kevin Xu, Kanchan Maiti, Sibel Bargu, Samuel Bentley, John White, Carol Wilson, George Xue. Proposal Title: Development of a Monitoring Program for Water Quality and Biogeochemical Processes of Louisiana Sediment Borrow Areas. Funding Agency: Bureau of Ocean Energy Management. Funding level: \$579,077 [16%]. Duration: 2017-2020.
- Principal Investigators: Kevin Xu, Samuel Bentley, Chunyan Li, Rick Shaw. Proposal Title: Assessment of Ship Shoal Borrow Areas for Coastal Restoration of Louisiana Barrier Islands. Funding Agency: Bureau of Ocean Energy Management. Funding level: \$460,914 [30%]. Duration: 2016-2019.
- Principal Investigators: Karen Luttrell, Joshua Kent, Samuel Bentley. Proposal Title: Acquisition of Gravimetric Instrumentation in Support of a New Quasigeoid Model for Accurate Elevations in Louisiana. Funding Agency: Louisiana Board of Regents. Funding level: \$153,000 [5%]. Duration: June 2016-June 2017.
- Principal Investigators: Kristine DeLong, Grant Harley, Samuel Bentley, Kevin Xu, Andy Reese. Proposal Title: *Investigation of an Ancient Bald Cypress Forest in the*

*Northern Gulf of Mexico, U.S.A.* Funding Agency: Bureau of Ocean Energy Management. Funding level: **\$261,075 [33%].** Duration: 2015-2018.

- Principal Investigators: Robert Twilley, Samuel Bentley, Nina Lam, Jim Chen, Kevin Xu. Proposal Title: Coastal SEES Collaborative Research: Changes in actual and perceived coastal flood risks due to river management strategies. Funding Agency: NSF. Funding Level: \$1,200,000 [20%]. Duration: September 2015-August 2019.
- Principal Investigators: Jim Chen, Robert Twilley, George Xue, Junhong Liang, et al. Proposal Title: *CyberSEES: Type 2: A Coastal Resilience Collaboratory: Cyberenabled Discoveries for Sustainable Deltaic Coasts.* Funding Agency: NSF. Funding level: \$1,199,154 [8%]. Duration: 2015-2019.
- Principal Investigators: Samuel Bentley. Proposal Title: CPRA Support for Technical Liaison to Master Plan 2017 Science and Engineering Board. Funding Agency: Coastal Protection and Restoration Authority. Funding level: \$6,608 [100%]. Duration: August 2014-December 2014.
- Principal Investigators: Eugene Turner, Samuel Bentley, Vincent Wilson. Proposal Title: *Recruitment of Superior Graduate Students in the Earth, Ocean, and Environmental Sciences.* Funding Agency: Louisiana Board of Regents. Funding level: **\$656,000 [33%].** Duration: Aug 2014 – Aug 2018.
- Principal Investigators: Kevin Xu, Samuel Bentley. Proposal Title: Characterization and Modeling of Sediment Settling, Consolidation, and Suspension to Optimize the Retention Rate of Sediment Diversions for Coastal Restoration. Funding Agency: Louisiana Coastal Protection and Restoration Authority Applied Research Program. Funding level: \$90,956 [50%]. Duration: 2014-2015.
- Principal Investigators: Samuel Bentley, Kevin Xu, and Ioannis Georgiou. Proposal Title: Mass Wasting Processes and Products of the Mississippi Delta Front: Data Synthesis and Observation. Funding Agency: Bureau of Ocean Energy Management. Funding level: \$604,366 [55%]. Duration: August 2013-July 2018. This is a pilot study to plan a larger project, re-evaluating delta front instabilities after the seminal work of Coleman in the 1970's.
- Principal Investigators Kevin Xu, Samuel Bentley, and Chunyan Li. Proposal Title: Assessment of Mud-Capped Dredge Pit Evolution on the Outer Continental Shelf of northern Gulf of Mexico. Funding Agency: Bureau of Ocean Energy Management. Funding level: \$357,099 [30%]. Duration: August 2014-July 2017.
- Principal Investigator: Samuel Bentley. Proposal Title: Sediment Capture in Unleveed Floodplains of the Mississippi River. Funding agency: Louisiana Coastal Protection and Restoration Authority. Funding level: \$72,135 [100%]. Duration: July 2015-June 2017.
- Principal Investigators: Samuel Bentley, Kevin Xu, and Jim Chen. The Water Institute of Gulf Geological and Geotechnical Characterization of the Middle Barataria and Middle Breton Sound Diversion Receiving Basins. Funding Agency: The Water Institute of the Gulf. Funding Level: \$296,927 [40%]. Duration: June 2014-Dec. 2015.
- Principal Investigators: Samuel Bentley. Proposal Title: CWPPRA PPL-23, Coast 2050 Region 2 Academic Advisor. Funding Agency: Louisiana Universities Marine Consortium. Funding level: \$9,000 [100%]. Duration: 2013-2015.

- Principal Investigators: Samuel Bentley, Kevin Xu, and Jim Chen. Proposal Title: Geological and Geotechnical Characterization of the Lower Barataria and Lower Breton Sound Diversion Receiving Basins. Funding Agency: The Water Institute of the Gulf. Funding Level: \$207,170 [50%]. Duration: June 2013-Dec. 2015. This is the first major geological investigation of diversion receiving-basin geology funded by Louisiana.
- Principal Investigators: Liu, K-B., Lam, N., Bentley, S.J., and Frappier, A., Proposal Title: Paleotempestology of the Caribbean region: A *Multi-proxy*, *Multi-site Study of the Spatial and Temporal Variability of Caribbean Hurricane Activity: Performance Based Extension*. Funding Agency: Inter-American Agency for Global Change Research. Funding Level: **\$299,902 [10%].** Duration: June 2011-June 2015.
- Principal Investigator: Samuel Bentley. Proposal Title: Sedimentation Processes on Marsh Island, Alabama. Funding Agency: Royal Engineers LLC. Funding level: \$4,230 [100%]. Duration: March 2013-Dec 2013.
- Principal Investigator: Samuel Bentley. Proposal Title: Measurement of sedimentation rates for the White Ditch study area. Funding agency: USGS. Funding level: \$9,000 [100%]. Duration: April 2013-Dec. 2013.
- Principal Investigators, Samuel Bentley, Chunyan Li, John White, Sibel Bargu. Proposal Title: RAPID: Sediment, water, and nutrient flux and fate in Lake Pontchartrain from the 2011 Bonnet Carre Spillway Opening. Funding Agency: NSF. Funding level: \$99,957 [20%]. Duration May 2011-May 2013.
- Principal Investigators Samuel Bentley, Chunyan Li, John White, Sibel Bargu. Proposal Title: Preliminary Sampling of Lake Pontchartrain for the 2011 Mississippi Flood. Funding Agency: Louisiana Sea Grant. Funding Level: \$10,000 [30%]. Duration: May 2011-May 2012.

# Projects Completed Prior to 2011:

- Principal Investigators: Reimer, Biassutti-Brown, Bentley, Bell, and Pienitz. Proposal Title: Nunatsiavut Nuluak: Understanding and Responding to the Effects of Climate Change and Modernization in a Northern Environment. Funding Agency: ArcticNet. Funding Level: \$375,000 [25%, 0% overhead]. Duration: April 2007-March 2011.
- Principal Investigators: Barber, Sydor, Bentley, Prinsenberg. Proposal Title: *Freshwater-Marine Coupling in Hudson Bay*. Funding Agency: ArcticNet. Funding Level:
  \$365,000 [25%, 0% overhead]. Duration: April 2007-March 2011.
- Principal Investigator: Bentley. Proposal Title: Oceanic Dispersal of Fluvial Sediment: Process and Product. Funding Agency: Canada National Science and Engineering Research Council (NSERC). Funding Level: \$135,000 [100%, 0% overhead]. Duration: July 2006 – June 2011.
- Principal Investigator: Bentley. Proposal Title: Canada Research Chair in Seabed Processes and Seabed Imaging. Funding Agency: Canada Research Chair Secretariat.
  Funding Level: \$500,000 [100%, 0% overhead]. Duration: July 2006 – June 2011.
- Principal Investigator: Bentley. Proposal Title: *Infrastructure for Seabed Processes and Imaging Laboratory*. Funding Agency: Canada Foundation for Innovation and Government of Newfoundland and Labrador. Funding level: \$679,000 [100%, 0% overhead]. Funding Period: July 2006 October 2009.

- Principal Investigators Liu, Lam, Bentley, Donnelly, Alfaro, Peros. Proposal title: *Paleotempestology of the Caribbean Region: A Multi-proxy, Multi-site Study of the Spatial and Temporal Variability of Caribbean Hurricane Activity*. Funding Agency: Inter-American Institute for Global Change Research. Funding Level: \$1,000,000 US [8%]. Duration: July 2006 – June 2011.
- Principal Investigators: Dalrymple, Bentley, Kineke, Liu, Mei, Shen, Trowbridge, Traykovski, and Yue. Proposal Title: *Mechanisms of Fluid Mud Interactions Under Waves*. Funding Agency: US Office of Naval Research. Funding Level: \$3,500,000
  US [10%]. Duration: July 2006 – June 2011.
- Principal Investigators: Snelgrove, Archambault, Juniper, et al. Proposal Title: Canada Healthy Oceans Network (CHONe). Funding Agency: NSERC Strategic Research Network. Funding level: \$5,000,000 [1%]. Duration: 2008-2013.
- Principal Investigators: Samuel J. Bentley and Alexandru Sheremet. Proposal Title: Observation and Modeling Study of Sediment Flux and Fate in the West Bay Diversion, Mississippi Delta. Funding Agency: CREST (a consortium of Federal and State agencies). Funding Level: \$49,751 [50%]. Duration: July 2005-June 2006.
- Principal Investigators: Samuel J. Bentley, Alexandru Sheremet, G. Paul Kemp, and Harry Roberts. Proposal Title: Sediment Dynamics and Management along Muddy Coasts in Louisiana. Funding Agency: Louisiana Governor's Office of Coastal Affairs. Funding Level: **\$76,223 [30%].** Duration: July 2005- June 2006.
- Principal Investigator: Samuel J. Bentley. Proposal Title: Building the Sedimentary Record: Physical and Biological Processes of Stratal Formation. Funding Agency: National Science Foundation CAREER. Funding Level: \$565,000 [100%], \$7,000 (LSU match). Duration: May 2001-April 2006.
- Principal Investigators: Andre Droxler, Larry Peterson, Samuel J. Bentley, Gerry Dickens, and Brad Opdyke. Proposal Title: Late Quaternary Siliciclastic and Carbonate Sediment Fluxes on the Slopes and Basin Floors of the Gulf of Papua, Papua New Guinea. Funding Agency: National Science Foundation Margins program. Funding Level: \$940,000 [30%]. Duration: October 2003-September 2006.
- Principal Investigators: James Cowan, Charles Wilson, William Patterson, Samuel J.
  Bentley. Proposal Title: *Fisheries Habitat of Juvenile Red Snapper in the Northern Gulf of Mexico*. Funding Agency: National Sea Grant. Funding Level: \$369,000
  [20%]. Duration: May 2003-April 2005.
- Principal Investigator: Samuel J. Bentley. Proposal Title: *Quantitative Sedimentology System for Characterizing the Seabed of the Louisiana Coastal Region*. Funding Agency: Louisiana Board of Regents. Funding Level: **\$80,000 (LaBOR) [100%]**, **\$5,200 (LSU match)**. Duration: June 2001-May 2002.
- Principal Investigator: Samuel J. Bentley. Proposal Title: Quantitative Chemical Mass Transfer in Coastal Sediments During Early Diagenesis: Effects of Biological Transport, Mineralogy, and Fabric. Funding Agency: Office of Naval Research. Funding Level: \$185,000 (ONR) [100%], \$25,000 (LSU). Duration: June 2000-December 2003.
- Principal Investigator: Samuel J. Bentley. Proposal Title: Geochronology of Sediment Accumulation in the Atchafalaya Basin. Funding Agency: US Corps of Engineers. Funding Level: \$23,000 [100%]. Duration: August 2002-August 2003. Currently on no-cost extension.

Principal Investigator: Samuel J. Bentley. Proposal Title: Exchange, Development, and Support of Watershed Management Expertise, Education, and Research between LSU-Shreveport and LSU-Baton Rouge. Funding Agency: LSU-S/Dept. of Agriculture. Funding Level: \$13,206 [100%]. Duration: July 2002 – Feb 2003.

Principal Investigator: Samuel J. Bentley. Proposal Title: Application of <sup>210</sup>Pb-<sup>137</sup>Cs Geochronology to Estimation of Growth-fault Offset, Southern Louisiana. Funding Agency: U.S. Army Corps of Engineers. Funding Level: \$15,000 [100%]. Duration: Dec 2001- June 2002.

Principal Investigators: Samuel J. Bentley and Harry Roberts. Proposal Title: *Physical Properties of Hydraulic Piston Cores from Intraslope Basins on Continental Slope, Northwestern Gulf of Mexico*. Funding agency: Fugro-McClelland Marine Geosciences. Funding level: **\$9,600 [50%]**. Duration: Dec 2002-June 2003.

Principal Investigator: Samuel J. Bentley. Proposal Title: Recent Geochronology of Sediment Deposits in the Wax Lake Delta. Funding Agency: Exxon-Mobil Upstream Research. Funding Level: **\$9,600 [100%].** Duration: Aug 2001-June 2002.

Principal Investigator: Samuel J. Bentley. Proposal Title: *High-Resolution Geochronology of Cores from Mississippi Sound and the Adjacent Shelf*. Funding Agency: Naval Oceanographic Command, NASA Stennis Space Center. Funding Level: **\$38,000 (NAVO) [100%].** Duration: May 2001-November 2002.

Principal Investigators: William Patterson, Samuel Bentley, James Cowan, Tyrell Henwood, and Charles Wilson. Proposal title: *Fisheries Habitat of Juvenile Red Snapper in the Northern Gulf of Mexico*. Funding Agency: National Sea Grant. Funding Level: **\$171,000 [25%]**. Duration: May 2001-April 2003.

# Journals edited, manuscripts referred, books and proposals reviewed

2011-Present	approximately 12 manuscripts and 6 NSF proposals reviewed per year.
2016	<i>Invited Reviewer</i> , NSF Career Proposal Review – 6 proposals reviewed by
	special invitation
2009-2012	Associate Editor (Sedimentology and Stratigraphy), Canadian Journal of
	Earth Sciences
2012	Panelist, NSF Marine Geology and Geophysics Review Panel
2005	Panelist, EPA STAR graduate fellowship proposal review panel
2004	Education Panelist, NSF CAREER Proposal Review Panel
2003-Present	Regular reviewer, Geology, Marine Geology, Continental Shelf Research,
	Journal of Sedimentary Research, Sedimentology, Journal of Geophysical
	Research. Regular reviewer for proposals from NSF Marine Geology and
	Polar Programs

#### Summary Results of Teaching Evaluations (present LSU G&G appointment only): [Scores include standard deviations in brackets]

Semester	Year	Rubric	Course #	Questions 1-8			Question 9 (Course Rating)		
				Candidate	Dept (Upper UG)	BASC (Upper UG)	Candidate	Dept (Upper UG)	BASC (Upper UG)
Spring	2011	GEOL	4164-001	3.7	3.60 [.34]	3.62 [.29]	3.69	3.56 [.31]	3.48 [.41]

Fall	2011	GEOL	3032 1-2	3.58	3.51 [.23]	3.67 [.27]	3.54	3.37 [.38]	3.53 [.37]
Spring	2012	GEOL	7132-001	3.66	3.68 [.05]	3.70 [.2]	3.53	3.64 [.19]	3.68 [.25]
Fall	2012	GEOL	3032-001	3.67	3.78 [.15]	3.69 [.23]	3.44	3.72 [.24]	3.57 [.36]
Fall	2012	GEOL	3032-002	3.71	3.78 [.15]	3.69 [.23]	3.57	3.72 [.24]	3.57 [.36]
Spring	2013	GEOL	4164-001	3.64	3.74[0.25]	3.64[0.26]	3.75	3.80[0.19]	3.51[0.42]
Spring	2013	GEOL	7132-001	3.89	3.66[0.27]	3.64[0.27]	3.91	3.72[0.21]	3.48[0.4]
Fall	2013	GEOL	3032	3.70	3.76[0.11]	3.63[0.42]	3.67	3.69[0.23]	3.49[0.42]
Spring	2014	GEOL	4164	3.78	3.62[0.12]	3.73[0.20]	3.82	3.53[0.20]	3.49[0.38]
Fall	2014	GEOL	3032	3.53	3.52[0.30]	3.63[0.25]	3.45	3.31[0.47]	3.47[0.40]
Fall	2015	GEOL	3032	3.99	3.67[0.35]	3.74[0.26	3.91	3.48[0.48]	3.62[0.32]
Spring	2016	GEOL	4164	3.78	3.50[0.24]	3.73[0.24]	3.79	3.38[0.48]	3.61[0.34]

Semester	Year	Rubric	Course #	Question 10 (Instructor Rating)			Responses	Enrollment
				Candidate	Dept (Upper UG)	BASC (Upper UG)		
Spring	2011	GEOL	4164-001	3.69	3.44 [.47]	3.51 [.42]	13	22
Fall	2011	GEOL	3032 1-2	3.54	3.32 [.36]	3.55 [.4]	28	45
Spring	2012	GEOL	7132-001	3.71	3.70 [.16]	3.67 [.27]	17	18
Fall	2012	GEOL	3032-001	3.56	3.75 [.2]	3.61 [.38]	9	20
Fall	2012	GEOL	3032-002	3.71	3.75 [.2]	3.61 [.38]	7	18
Spring	2013	GEOL	4164-001	3.83	3.83[0.19]	3.51[0.40]	25	32
Spring	2013	GEOL	7132-001	4.0	3.72[0.21]	3.51[0.42]	11	11
Fall	2013	GEOL	3032	3.73	3.78[0.16]	3.49[0.42]	30	36
Spring	2014	GEOL	4164	3.82	3.35[0.32]	3.61[0.30]	33	35
Fall	2014	GEOL	3032	3.64	3.28[0.53]	3.47[0.44]	41	44
Fall	2015	GEOL	3032	4.0	3.46[0.58]	3.61[0.39]	36	42
Spring	2016	GEOL	4164	3.71	3.33[0.44]	3.61[0.36]	14	20

# **Teaching history**

# LSU Geology and Geophysics

- GEOL 7132 Dynamics of Sedimentation. 2 hours lecture, 1 hour lab. Spring 2012, 2013, 2014 15 students.
- GEOL 4164 Deltaic Geology. 2 hours lecture, 1 hour lab. Spring 2011, 2013, 2014, 2016 - 40 students.
- GEOL 3032 Introduction to Sedimentology and Depositional Environments. 3 hours lecture, 1 hour lab. Fall 2011-2016 45 students.

Memorial University of Newfoundland, Earth Sciences Department

- EASC 6320 Advanced Sedimentology. 3 hours lecture. Spring 2008, 2009, 2010 - 8 students.
- EASC 4302 Advanced Marine Geology. 3 hours lecture. Spring 2007, 2008 30 students.
- EASC 2702 Introduction to Sedimentology and Stratigraphy. 3 hours lecture, 1 hour lab. Fall 2006, 2007, 2008, 2009, 2010 - 45 students.

LSU Oceanography and Coastal Sciences

- OCS 2009 Introduction to the Marine Environment: Physical and Geological Processes (New Course), Section 1. 3 hours lecture, 1 hour lab. Spring 2003, 2005 10 students.
- OCS 4001 Introduction to Sediment Radiochemistry (New Course), Section 6. 1 hour lecture. Spring 2002, 2004 9 students.
- OCS 4210 Geological Oceanography, Section 1. 3 hours lecture. Fall 2001, 2002, 2003, 2004, 2005 14 students.
- OCS 1005 Introduction to Oceanography, Sections 1 and 2. 3 hours lecture each. Fall 2000 160 students.

#### **Student Mentoring**

#### <u>Summary</u>

BS Honors/Senior Theses: 11 completed, 0 in progress MS Theses: 20 completed, 0 in progress PhD Dissertations: 12 completed, 1 in progress

#### **Undergraduate Students**

*BS Honors/Senior Thesis Advisor for:* Stephanie Johnson, Memorial BS, December 2007 Elisabeth Kahlmeyer, Memorial BS, May 2008 Trisandhi Gosine, Memorial BS, May 2009 Kendra Carrigan, Memorial BS, December 2010 Ed Lo, LSU G&G BS, December 2013 Matthew Smith, LSU G&G BS, May 2014 James Smith, LSU G&G BS, May 2014 James Smith, LSU G&G BS, May 2015 Suyapa Gonzales, LGU G&G BS, December 2016 Brianna Crenshaw, LSU G&G BS May 2018 Ryder Myers, LSU G&G BS December 2018 Rory Escobedo, LSU G&G BS 2021

BS Honors Thesis Committee Member for: Lindsay Prothro, LSU BS, May 2013 Shane Cone, LSU BS, May 2013 Patrick Robichaux, LSU BS, May 2015 Jennifer Kenyon, LSU BS, May 2016 Abigail Heath, LSU BS, December 2017 Ryder Myers, LSU BS, December 2018

#### Graduate Students

#### Graduate Advisor for:

- 1. Kristina Rotondo, LSU DOCS MS, May 2004
- 2. Triniti Dufrene, LSU DOCS MS, May 2005
- 3. Brian Velardo, LSU DOCS MS, May 2005
- 4. Luke Patterson, LSU DOCS MS, May 2006
- 5. Skyler Neylon, LSU DOCS MS, May 2006
- 6. Mitch Andrus, LSU DOCS MS, August 2007
- 7. Kathryn Denommee, Memorial MS, May 2010
- 8. Elisabeth Kahlmeyer, Memorial MS, December 2010
- 9. Jeff Fabre, LSU G&G MS, May 2012
- 10. Ashley Howell, LSU G&G MS, August 2013
- 11. Laura Sorey, LSU G&G MS, May 2014
- 12. Greg Keller, LSU G&G MS, December 2015
- 13. Jeff Bomer, LSU G&G MS, August 2016
- 14. Ethan Hughes, LSU G&G MS, December 2016
- 15. Chris Magliolo, LSU G&G MS, December 2017
- 16. Meg O'Connor, LSU G&G MS, May 2017
- 17. Ryan Clarke, LSU G&G MS, May 2018
- 18. JT Truong, G&G MS, August 2018
- 19. Suyapa Gonzalez Rodriguez, G&G MS, August 2018
- 20. Andrew Courtois, G&G MS, December 2018
- 1. Lawrence Febo, LSU G&G PhD, December 2008
- 2. Zahid Muhammad, LSU DOCS PhD, August 2009
- 3. Peter Huelse, Memorial PhD, December 2011
- 4. Erlangga Septama, Memorial PhD, December 2015
- 5. Lina Stolze, Memorial PhD, December 2015
- 6. Marie Thomas, LSU G&G PhD, co supervised with S. Warny, May 2015
- 7. Kathryn Denommee, LSU G&G PhD, December 2015
- 8. Jill Banks, LSU G&G PhD, December 2016
- 9. Crawford White, LSU G&G PhD December 2017
- 10. Jeffrey Obelcz, LSU DOCS PhD, co-supervised with K. Xu, December 2017
- 11. Giancarlo Restreppo, LSU G&G PhD, May 2019
- 12. Mitch Andrus, LSU G&G PhD May 2020
- 13. Jeff Duxbury, LSU G&G PhD, expected May 2023

# Thesis Committee Membership

- Member of Thesis Committee for:
  - Katherine Wheelock, LSU DOCS MS, 2003

Paul Libbers, LSU Chemical Engineering MS, 2002

Fernando Flores, LSU Petroleum Engineering PhD, 2002, Dean's representative Lynn Valencic, LSU Physics and Astronomy PhD, 2003, Dean's representative

Allen Reed, LSU DOCS PhD, May 2004

Lauren Mione, LSU DOCS MS, December 2004

Micah Russell, LSU DOCS MS, December 2004

Melissa Baustian, LSU DOCS MS, May 2005 Thorpe Halloran, LSU RNR PhD, May 2006 Hilary Collis, LSU DOCS MS, Dec 2006 Jeff Agnew, LSU G&G PhD, May 2007 Kevin Boswell, LSU DOCS PhD, May 2006 David Wells, LSU DOCS PhD, May 2007 Chris Smith, LSU DOCS PhD, May 2007 Matt Johnston, Memorial MS, December 2010 Julio Salcedo, Memorial PhD, May 2011 Elizabeth Chamberlain, LSU G&G MS, May 2012 Kolawole Bello, LSU G&G MS, December 2012 Zachary Hendershott, LSU G&G MS, August 2012 Hunter Berch, LSU G&G MS, August 2013 Taylor Berlin, LSU G&G MS, December 2013 Brittany Schwarzkopf, LSU DOCS MS, May 2014 Tom Bianchette, LSU DOCS PhD, May 2015 Marie Thomas, LSU G&G, PhD, May 2015 Emad Elfar, LSU G&G, PhD, May 2016 Andrew Swales, University of Sidney, Australia, PhD, May 2017 Shannon Ferguson, LSU G&G, PhD, May 2017 Randy Paylor, LSU G&G PhD, May 2017 Patrick Robichaux, LSU DOCS MS, December 2017 Jiaze Wang, LSU DOCS PhD, May 2018 Yuting Li, LSU G&G PhD, May 2018 Ian Floyd, LSU Civil & Environmental Engineering PhD, expected Dec 2019 John Zheng, LSU DOCS PhD, expected May 2020 Wokil Bam, LSU DOCS PhD, expected May 2020