

CURRICULUM VITAE

Natalia A. Sidorovskaia

Professor and Chairperson

Department of Physics

University of Louisiana at Lafayette

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<https://physics.louisiana.edu/node/94>

EDUCATION

University of New Orleans, USA, 1994-1997

Ph.D. in Engineering and Applied Science (Physics track), 1997

M.S. in Applied Physics, 1996

Gorky State University, Nizhny Novgorod, Russia, 1985-1990

M.S. in Radiophysics, 1990

EMPLOYMENT/APPOINTMENTS

University of Louisiana at Lafayette

2012 – Present Professor, Department of Physics

2007 – 2025 Chairperson, Department of Physics

2006 – 2012 Associate Professor, Department of Physics

2000 – 2006 Assistant Professor, Department of Physics

Texas A&M University-Corpus Christi

2024-2026 Associate Graduate Faculty

Landmark Graphics Corporation (A Halliburton Company)

1998 – 2000 On-site Consultant

University of New Orleans

1997 – 1998 Professional Contractor, Department of Physics

1995 – 1996 Research Associate, Department of Physics

1994 Research Assistant, Department of Physics

University of Miami

1996 Visiting Research Associate, Division of Applied Marine Physics

Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia

1992 – 1994 Junior Researcher, Hydrophysics Division

1990 – 1992 Probationer-Researcher, Hydrophysics Division

PROFESSIONAL CERTIFICATIONS

2023 Adult Mental Health First Aid USA certification

2020 Certified Online Teacher (Updated 2023)

2016 Machine Learning certification, Coursera course from Stanford University

2000 Instructor Certification in DepthTeam Express (Landmark Graphics Corporation
Depth Imaging Software)1999 Customer Support Certification in DepthTeam Explorer (Landmark Graphics
Corporation Depth Imaging Software)1998 Customer Support Certification in DepthTeam Interpreter (Landmark Graphics
Corporation Depth Imaging Software)**AWARDS AND HONORS**2020-2022 *American Council on Education (ACE) Fellow* (Host Institution: University of
Pittsburgh, Provost (Ann E. Cudd) office; Chancellor Patrick D. Gallagher)2019 *Certificate of Achievement in Sponsored Research Award*, University of
Louisiana at Lafayette2017 *Research Excellence Award*, University of Louisiana at Lafayette2016 *Outstanding Achievement in Research and Sponsored Activities Award*,
University of Louisiana at Lafayette2014 – 2026 *Coca-Cola/Board of Regents Endowed Professorship in Physics*, University of
Louisiana at Lafayette2013 *Fellow*, Acoustical Society of America1997 *Bill Good Award from Physics faculty*, in recognition of outstanding research
in Physics, University of New Orleans1996 *Bill Good Award from Physics faculty*, in recognition of outstanding research
in Physics, University of New Orleans

- 1996 *Distinguished Graduate Research Award at the Doctoral Level*, University of New Orleans
- 1997 “Who’s Who in the World”, 14th Edition
- 1994 Grant of the International Soros Foundation
- 1985 – 1990 *State University Fellowship*
- 1985 *Gold Medal* on the graduation from high school (Valedictorian)

RESEARCH INTERESTS

Marine ecosystem studies using acoustic methods. Marine mammal acoustics. Ocean noise and climate change. Ocean natural resources mapping using acoustics. Machine Learning and Artificial Intelligence algorithms for acoustic data mining. Computational models for sound propagation in inhomogeneous waveguides (with emphasis on applications to ocean acoustics). Theoretical methods of scattering from objects in waveguides. Hydrophysical inverse problems (source imaging, ocean acoustic tomography). Big data intelligence. Medical Acoustics. Physics Education Research.

LEADERSHIP EXPERIENCE AND TRAINING

As *department Chairperson* responsible for developing cohesive departmental strategic plans to fit the college and university mission and assure sustainable departmental growth; prioritizing and administering departmental operational, externally generated research, and foundation budgets; working closely with the Vice-President for Research to maintain Physics leadership and interdisciplinary research agenda in the Louisiana Accelerator Center; incentivizing technology transfer and patent applications from Physics faculty; teaching scheduling and faculty load managing; early-career faculty mentoring; faculty and research and administrative staff hiring proposals, searches, and hiring; tenure-track faculty annual reviews and tenure recommendations to the Dean; annual faculty evaluation; faculty promotion and salary adjustments; curriculum development (including first college interdisciplinary doctoral program in Earth and Energy Sciences and cross-departmental joint positions); graduate and undergraduate majors recruiting (regionally, nationally, and globally)

and retention; departmental social media communication; departmental facilities upgrades and management; community outreach; alumni relationship and development of fundraising proposals for potential donors (which led to establishing two Endowed Professorships, two undergraduate scholarships, undergraduate research lab, faculty and student development fund, and doctoral program scholarship).

As *ACE Fellow* (training at the host institution (The University of Pittsburgh, Provost office) and via the ACE Leadership development program): strategic enrollment management, DEI initiatives, university budgetary models and new budget model transition, unionization, leadership position hiring, framing academic freedom and freedom of expression on campus, elevating student success and teaching priorities, addressing performance-based funding and state appropriation challenges, aligning budgetary and strategic priorities.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union

Acoustical Society of America

Sigma Pi Sigma National Physics Honor Society

Southwest Louisiana Geophysical Society

GRANTS (as a PI/Co-PI)

2026-27	\$200,000	Louisiana Board of Regents, Research Competitiveness Subprogram: <i>Next-Generation Coastal Monitoring for Louisiana: EM–Acoustic–AI Fusion for Energy Infrastructure Resilience and Habitat Health</i> (PI, pending)
2025-27	\$80,000	NOAA-IOOS: <i>Enhancing AUV ecological monitoring of Gulf of Mexico</i> (UL Lafayette PI)
2024-26	\$9,400,000	Louisiana Department of Wildlife and Fisheries: <i>Leveraging Opportunities and Strategic Partnerships to Advance Tolerant Oysters for Restoration (LO-SPAT), YEARS 4-5</i> (Co-PI)
2021-25	\$598,779	(FY2020) Defense Established Program to Stimulate Competitive Research competition: <i>Glider's Deepwater Hurricane Reconnaissance in the Gulf of Mexico</i> (PI)

2021-24	\$14,065,204	Louisiana Department of Wildlife and Fisheries: <i>Leveraging Opportunities and Strategic Partnerships to Advance Tolerant Oysters for Restoration (LO-SPAT)</i> (Co-PI)
2021	\$60,000	International Association of Oil and Gas Producers: Preparation of Datasets for JIP Acoustic Modelling Workshop, SCS07 (PI)
2018-21	\$367,288	Bureau of Ocean Energy Management (through HDR): <i>Passive Acoustic Monitoring Program for Northern Gulf of Mexico</i> (PI)
2018 – 21	\$456,593	National Science Foundation (MRI): <i>Acquisition of an integrated AUV system for observations of physical and biogeochemical interactions in the Northern Gulf of Mexico ecosystem across spatiotemporal scales</i> (PI)
2018 – 19	\$680,552	Gulf of Mexico Research Initiative: <i>Littoral Acoustic Demonstration Center – Gulf Ecological Modeling and Monitoring (LADC-GEMM)</i> , www.ladcgemm.org (PI)
2017 – 21	\$278,415	International Association of Oil and Gas Producers, Sound and Marine Life Joint Industry Project: <i>3-D Source Characterisation Experiment - Data Analysis & Reporting</i> (PI)
2017 – 18	\$326,000	Bureau of Ocean Energy Management (through HDR): <i>Passive Acoustic Monitoring Program for the Northern Gulf of Mexico</i> (PI)
2015 – 17	\$5,238,174	Gulf of Mexico Research Initiative: <i>Littoral Acoustic Demonstration Center – Gulf Ecological Modeling and Monitoring (LADC-GEMM)</i> , www.ladcgemm.org (PI)
2014	\$1,000	University of Louisiana at Lafayette: <i>Travel grant</i>
2014	\$500	American Physical Society: <i>Travel Grant for Women Speakers Program</i>
2013	\$3,000	American Petroleum Institute: <i>Travel Grant</i>
2013	\$3,000	3 rd International Conference on the Effects of Noise on Aquatic Life: <i>Travel Grant</i>
2012 – 13	\$10,000	Russian Academy of Sciences: <i>Travel Grant</i> (PI)
2010 – 11	\$34,000	International Association of Oil and Gas Producers, Sound and Marine Life Joint Industry Project: <i>Source Characterization Study 2007 (Data Analysis/Modeling Component)</i> , Amend. 2 (PI)
2010 – 2011	\$192,197	National Science Foundation, RAPID: <i>Modeling of Short-Term and Long-Term Marine Mammal Population Trends in the</i>

		<i>Vicinity of the Deepwater Horizon Oil Spill Using Passive Acoustic Monitoring Cues (Co-PI)</i>
		Greenpeace "Arctic Sunrise" research ship time award (~\$50,000 in-kind)
2008 – 10	\$49,164	Louisiana Governor's Information Technology Initiative: <i>Development of the Ocean Acoustic propagation Model for the Louisiana Immersive Technologies Enterprise (LITE) environment (PI)</i>
2007 – 08	\$57,662	International Association of Oil and Gas Producers, Sound and Marine Life Joint Industry Project: <i>Source Characterization Study 2007 (Data Analysis/Modeling Component) (PI)</i>
2007 – 08	\$65,500	SPAWAR (congressional appropriation): <i>Using passive acoustics to detect Beaked Whales (PI)</i>
2005 – 06	\$1,381	Office of Faculty Development and Academic Planning, UL Lafayette (Instructional Improvement Mini-Grants): <i>Implementation and Effectiveness assessment of Interactive Lecture Demonstrations in Introductory Physics Courses at UL Lafayette (PI)</i>
2005	\$1,000	National Science Foundation (EPSCoR): <i>Travel Grant for Emerging Faculty (PI)</i>
2005 – 2006	\$19,626	International Association of Geophysical Contractors (On Behalf of the Industry Research Funding Coalition): <i>Littoral Acoustic Demonstration Center - Seismic Airgun Characterization in the Gulf of Mexico (PI)</i>
2005 – 2006	\$7,800	National Science Foundation (EPSCoR, Pilot Funding for New Research): <i>Facilitation of biomedical acoustics research at the Physics Department of UL Lafayette (PI)</i>
2003	\$3,665	NASA-Stennis Space Center: <i>IAGC Airgun Calibration (PI)</i>
2001 – 2004	\$21,000	Office of Naval Research: <i>Littoral Acoustic Demonstration Center. Phase One: Contributions of Marine Mammals and Offshore Drilling to the Ambient Noise Baseline at the Shelf Edge and Acoustic/Oceanographic Equipment Construction (Lead PI: George Ioup, UNO, ~\$2,000,000 in total) (UL PI)</i>
2002 – 2003	\$360	Office of Faculty Development and Academic Planning, UL Lafayette: <i>Faculty Development Grant</i>
2001 – 2002	\$461	Office of Faculty Development and Academic Planning, UL Lafayette: <i>Faculty Development Grant for workshop on fire ants acoustic research,</i>

2001 – 2004	\$82,788	Research Competitiveness Subprogram, Board of Regents Support Fund: <i>Computational Development of the Unified Approach to the Problems of Signal Propagation and Scattering in Ocean Environments</i> (PI)
2001	\$3,500	University of Louisiana at Lafayette, Summer Research Award: <i>Simulation of Acoustic Signal Distortion in Shallow Water</i>

UNIVERSITY SERVICE

Presidential Campus Planning Committee (2023-2025)
 Presidential University Council (2021-2022 as ACE Fellow)
 University Grievance Committee (2016-current; Chair 2019-2021)
 Department Head Council (2007-current; Chair 2016 – 2018)
 Faculty Senate (2008 – Present)
 Chair, Committee on Academic Affairs and Standards (2017 – 2021)
 Graduate Curriculum Committee (2008-2015; Chair 2015 – 2017)
 Chair, Inaugural Science Day Committee (2014)
 Co-Chair, Dean of Sciences Search Committee (2013)
 Co-Founder, SMART (Science Meets ART) Festival (2013 – 2014)
 Graduate Council (2010-2012)
 Undergraduate Program Coordinator, Department of Physics (2012 – 2015)
 Graduate Program Coordinator, Department of Physics (2006 – 2007)
 Graduate Appeal Committee (2001 – 2007)
 Graduate Faculty Review Committee (2006 – 2007)
 Mentor, Louisiana Alliance for Minority Participation scholars (2001 – 2007)
 Concert Committee (2003 – 2012)
 Judge for Literary Rallies and Scientific Fairs (2003 – 2012)

PROFESSIONAL SERVICE

Associate Editor of *Jasa Express Letters* (since July 2024)
 Scientific Committee for the E&P Sound and Marine Life JIP Acoustic Modelling Workshop (July 2022)

Technical Program Chair, Acoustical Society of America (Fall meeting, 2017)

Technical Program Organizing Meetings, Acoustical Society of America (2004, 2007, 2010, 2011)

Reviewer (Nature/Scientific Reports, Journal of Acoustical Society of America, Canadian Acoustics Journal, Physics Essays, AIP, McGraw-Hill, Addison Wesley)

Special Sessions, Organizer and Chair/Co-Chair

Physical Acoustics, Underwater Acoustics and Acoustical Oceanography: Meteorological Acoustics, Acoustical Society of America, May 19-23, 2025, New Orleans, USA

Physical Acoustics, Underwater Acoustics and Acoustical Oceanography: Meteorological Acoustics, Acoustical Society of America, May 13-17, 2024, Ottawa, Canada

Signal Processing in Acoustics: Signal Processing Potpourri I, Acoustical Society of America, November 18-22, 2024, Online meeting

Acoustics of extreme weather events, Acoustical Society of America, December 4-8, 2023, Sydney, Australia

Marine Mammal Synthesis workshop, October 31-November 2, 2018, Washington, DC

"Understanding Population Status, Trends and Connectivity of Gulf of Mexico Large Marine Vertebrates as Sentinels for Ecosystem Health in the Context of Restoration", GOMOSSES conference, February 2017, New Orleans, LA

"Gulf of Mexico Acoustic Research Grand Challenges and Convergence Research Approaches", IEEE-ICASSP 2017, March 2017, New Orleans, LA

Special Sessions in memory of George Ioup "Acoustic research in the Northern Gulf of Mexico", Acoustical Society of America, Fall meeting 2017, New Orleans, LA

"Modeling and Observing the Physical-Biological Interactions that Organize the Spatiotemporal Distribution of Biomass in Marine Ecosystems", 2016 Ocean Sciences meeting, February 21-26, New Orleans, LA, USA

"Fusion of bio-physical data and predictive modeling to understand Gulf of Mexico marine species resilience to environmental stresses and disasters", 2016 Oil spill and Ecosystem Science conference, February 1-4, 2016, Tampa FL

"Acoustics and the Deepwater Horizon Oil Spill I", Acoustical Society of America meeting, November 2010, Cancun

COMMUNITY OUTREACH

Speaking of Science (Louisiana Board of Regents Program) Volunteer

“Dispatches from the Gulf”, Discussion Panelist, Shreveport Science Center, April 7, 2016

Congressional Visit on June 1, 2015, organized by the American Physical Society. Talked to staffers of Senators Bill Cassidy and David Vitter, Representatives Charles Boustany and Steve Scalise and to Mississippi Senator Thad Cochran about support for funding for basic research.

Science Meets Art (SMART) festival organizing committee (LITE Center, 10/25/2013)

Science Meets Art (SMART) festival organizing committee (LITE Center, 10/25/2014)

News media coverage

<http://theadvocate.com/news/11778331-123/ul-lafayette-team-heads-back-to>

<http://gulfresearchinitiative.org/tracking-marine-mammal-recovery-deepwater-horizon-oil-spill/>

<http://www.katc.com/story/28094751/ul-leads-research-on-oil-spills-effect-on-whales?clienttype=generic&mobilecgbypass>

<http://krvs.org/post/apres-midi-march-16-ul-lafayette-physics-math-52-million-research-grant-lynda-frese-residency>

<http://www.greenpeace.org/usa/en/news-and-blogs/campaign-blog/whale-ho/blog/26389>

<http://news.discovery.com/animals/sperm-whales-gulf-oil-spill.html>

<http://esciencenews.com/articles/2010/11/16/listening.ocean.spills.and.their.ecological.effects>

<http://www.youtube.com/watch?v=pb2uL-WyVaE>

PUBLICATIONS

BOOKS

1. Alexander I. Khil'ko, Jerald W. Caruthers, Natalia A. Sidorovskaia, *“Ocean Acoustic Tomography. A review with Emphasis on the Russian Approach,”* Russian Academy of Sciences, Institute of Applied Physics, Nizhny Novgorod, 1998

CHAPTERS IN BOOKS

1. Sidorovskaia, N.A., Ackleh, A.S., Ma, B., Tiemann, C.O, Ioup, J.W., and Ioup, G.E. (2016).

- "Passive acoustic monitoring of environmental impact of oil exploration in the Gulf of Mexico," in book: *"Effects of Noise on Aquatic Life II,"* Popper, Arthur, Hawkins, Anthony (Eds.), Vol. 875 of the series Advances in Experimental Medicine and Biology, 1007-1014.
2. Ioup, G.E., Ioup, J.W., Sidorovskaia, N.A., Tiemann, C.O., Kuczaj, S.A., Ackleh, A.S., Newcomb, J.J., Ma, B., Paulos, R., Ekimov, A., Rayborn, G.H., Stephens, J.M., Tashmukhambetov, A.M. (2016). "Environmental Acoustic Recording System (EARS) in the Gulf of Mexico," In book: *"Listening in the Ocean: new discoveries and insights on marine life from autonomous passive acoustic recorders,"* Au, Whitlow W.L., Lammers, Marc O. (Eds.), Springer-Verlag New York
 3. Werby, M.F., and Sidorovskaia, N.A. (2001). "Modern developments in the theory and application of classical scattering," in book: *"ACOUSTIC INTERACTIONS WITH SUBMERGED ELASTIC STRUCTURES. Part III: Acoustic Propagation and Scattering, Wavelets and Time Frequency Analysis,"* edited by Ardeshir Guran, Adrianus De Hoop, Dieter Guicking, and Francesco Mainardi, World Scientific Publishing, New Jersey, August 2001, pp.256-358 (ISBN: 981-02-2950-X)
 4. Postoenko, Ya.K., Sidorovskaya, N.A., et al., (1993). "The reconstruction of structure of moving acoustical sources with complex spectrum," In book: *"Formation of acoustical waves in oceanic waveguides. Inhomogeneity reconstruction"*, ed. Zverev V.A., Institute of Applied Physics of Russian Academy of Sciences, Nizhny Novgorod, 35 pp., 1993 (in Russian, translated in English).

PEER-REVIEWED PUBLICATIONS

1. Liang, B., Waxler, R., Sidorovskaia, N. (2025). Bayesian inversion for hurricane parameters based on underwater ambient noise levels. The Journal of the Acoustical Society of America 158(3), 1914–1920 (2025), <https://doi.org/10.1121/10.0039254>
2. Li, K., and Sidorovskaia, N. (2024). Marine compressed air source array acoustic field characterization from at-sea measurements: long-range propagation. The Journal of the Acoustical Society of America 156, 2022–2033 (2024), <https://doi.org/10.1121/10.0029024>
3. Li, K., Sidorovskaia, N., Guilment, T., Tang, T., Tiemann, C.O., Griffin, S. (2023). Investigating Beaked Whale's Regional Habitat Division and Location Density Trends near the Deepwater Horizon Oil Spill Site Through Acoustics. Frontiers in Marine Science, 9. DOI:10.3389/fmars.2022.1014945
4. Sidorovskaia, N., and Li, K. (2022). Marine compressed air source array primary acoustic field characterization from at-sea measurements. The Journal of the Acoustical Society of America 151, 3957-3978 (2022) <https://doi.org/10.1121/10.0011678>
5. Li, K., Sidorovskaia, N.A., Guilment, T., Tang, T., Tiemann, C.O. (2021). Decadal Assessment of Sperm Whale Site-Specific Abundance Trends in the Northern Gulf of Mexico Using Passive Acoustic Data. J. Mar. Sci. Eng. 2021, 9, 454, <https://doi.org/10.3390/jmse9050454>
6. Guilment, T., Sidorovskaia, N., and Li, K. (2020). Modelling the Acoustic Repertoire of Cuvier's Beaked Whale Clicks. The Journal of the Acoustical Society of America **147**, 3605-3612, <https://doi.org/10.1121/10.0001266>
7. Li, K., Sidorovskaia, N., and Tiemann, C. (2020). Model-based unsupervised clustering for distinguishing Cuvier's and Gervais' beaked whales in acoustic data. Ecological Informatics, vol. 58, 19p. (<https://doi.org/10.1016/j.ecoinf.2020.101094>)

8. Ackleh, A.S.; Chiquet, R.A.; Ma, B.; Tang, T.; Caswell, H.; Veprauskas, A.; Sidorovskaia, N. (2017). Analysis of lethal and sublethal impacts of environmental disasters on sperm whales using stochastic modeling. *Ecotoxicology*, 1-11. doi:10.1007/s10646-017-1813-4
9. Sidorovskaia, N.A. and Li, K. (2016). "Decadal evolution of the Northern Gulf of Mexico soundscapes," *Proceedings of Meetings on Acoustics*, 27(1), 040014, doi: 10.1121/2.0000382
10. Ziegwied, A., Dobbin, V., Pierpoint, C., Sidorovskaia, N., Dyer, S. (2016). "Using Autonomous Surface Vehicles for Passive Acoustic Monitoring (PAM)," *OCEANS 2016 MTS/IEEE Monterey*, Monterey, CA, 2016, pp. 1-5., doi: 10.1109/OCEANS.2016.7761380
11. Chiquet, R.A., Ma, B., Ackleh, A.S, Pal, N., and Sidorovskaia, N. (2013). "Demographic analysis of sperm whales using matrix population models," *Ecological Modelling* 248, 71– 79
12. Ilyazov, R., R., Khilko, A. , Khobotov, A., Yakhno, V. , Sanin, A. , Sanina, O., Sidorovskaya, N., Figovsky, O., and Yakhno, T. (2012) "Dynamics of molecular self-assembly of drying liquid drop components: utilization of the phenomenon," *"Scientific Israel - Technological Advantages" (SITA-Journal)*, **14**(1), 32 p.
13. Ackleh, A., Ioup, G.E., Ioup, J.W., Ma, B., Newcomb, J., Pal, N., Sidorovskaia, N., and Tiemann, C. (2012). "Assessing the Deepwater Horizon oil spill impact on marine mammal population through acoustics: endangered sperm whales," *J. Acoust. Soc. Am.* **131** (3), pp. 2306-2314.
14. Tiemann, Chris O., Jaffe, Jules S. , Roberts, Paul L. D. , Sidorovskaia, Natalia A., Ioup, George E. , Ioup, Juliette W. , Ekimov, Alexander , Lehman, Sean K. (2011). "Signal and image processing techniques as applied to animal bioacoustics problems," *Acoustics Today* **7** (3), pp. 35-43. **(invited featured article)**
15. Tashmukhambetov, A.M., Ioup, G.E., Ioup, J.W., Sidorovskaia, N.A., Newcomb, J.J. (2008). "3-Dimensional seismic array calibration study: experiment and modeling," *J. Acoust. Soc. Am.* **123**(6), 4094-4108.
16. Sidorovskaia, N.A. , Ioup, G.E., Ioup, J.W., Tashmukhambetov, A.M., Newcomb, J.J., Stephens, J.M., and Raybon, G.H. **(2006)**. "Modeling tools for 3-d airgun source characterization studies," *Proceedings of the 8-th European Conference on Underwater Acoustics*, edited by S.M. Jesus and O.C. Rodrigues, Carvoeiro, Portugal, 12-15 June, 2006, pp. 95-100.
17. Tashmukhambetov, A.M., Sidorovskaia, N.A., Ioup, G.E., Ioup, J.W., *et al* **(2006)** "3-d airgun source characterization and propagation modeling", in *SEG Technical Program Expanded Abstracts*, vol. **25**, pp.26-30, doi:10.1190/1.2370084 (presented at SEG meeting, New Orleans, October 2006)
18. Sidorovskaia, N.A., Tashmukhanbetov, A.M., Ioup, G.E., Ioup, J.W., Newcomb, J.J., Stephens, J.M., Walker, C., and Rayborn, G.H. (2005). "Littoral Acoustic Demonstration Center: Experimental and Modeling Capabilities for Assessment of the Environmental Impact of Acoustic Sources in the Gulf of Mexico," *Proceedings of the 9th World Multiconference on Systemics, Cybernetics and Informatics (WMSCI 2005)*, vol. IX, pp. 113-114 (Orlando, USA, July 2005) **(invited talk)**
19. Caruthers, J.W., Roman, D.A., Sidorovskaia, N.A., and Vinogradov, S. (2005). "Prospects and Techniques for Eddy-Resolving Acoustic Tomography in the Eastern Gulf of Mexico," *Proceedings of the 9th World Multiconference on Systemics, Cybernetics and Informatics (WMSCI 2005)*, vol. IX, pp. 106-107 (Orlando, USA, July 2005) **(invited talk)**
20. Newcomb, J.J., Sanders, W., Stephens, J.M., Walker, C., Brack, B., Rayborn, G.H., Sidorovskaia, N.A., Tashmukhambetov, A.M., Ioup, G.E., Ioup, J.W., and Chapin. S.R. (2005)

- "Calibration and Analysis of Seismic Airgun Data from an EARS Buoy," in *Proceedings of 23rd Annual Gulf of Mexico Information Transfer Meeting*, pp. 83-100 (January 2005) (**invited talk**)
21. Ioup, G.E., Ioup, J.W., Sidorovskaia, N.A. *et al.* (2005) "Analysis of Bottom-Moored Hydrophone Measurements of Gulf of Mexico Sperm Whale Phonations," *Proceedings of 23rd Annual Gulf of Mexico Information Transfer Meeting*, pp. 109-136 (January 2005) (**invited talk**)
 22. Sidorovskaia, N. A. (2004). "Systematic studies of pulse propagation in ducted oceanic waveguides in normal mode representation," *The European Physical Journal, Applied Physics* **25** (2), 113-131.
 23. Sidorovskaia, N.A., Ioup, G.E., Ioup, J.W., and Caruthers, J.W. (2004). "Acoustic propagation studies for sperm whale phonation analysis during LADC experiments," in *HIGH-FREQUENCY OCEAN ACOUSTICS*, edited by Michael B. Porter, Martin Siderius, William A. Kuperman (AIP Conference Proceedings, 2004), pp. 288-295.
 24. Caruthers, J.W., Quiroz, E., Fisher, R., Meredith, R., Sidorovskaia, N.A., and the KauaiExGroup. (2004). "Side-Scan Sonar Survey Operations in Support of KauaiEx," in *HIGH-FREQUENCY OCEAN ACOUSTICS*, edited by Michael B. Porter, Martin Siderius, William A. Kuperman (AIP Conference Proceedings, 2004), pp. 366-372.
 25. Newcomb, J.J., Fisher, R., Field, R., Ioup, G.E., Ioup, J.W., Larue, J., Sidorovskaia, N.A., *et al.* (2003) "Using Acoustic Buoys to Assess Ambient Noise and Sperm Whale Vocalizations," *Proceedings of MMS-ITM Workshop*, pp. 269-276 (**invited talk**, January 2003)
 26. Newcomb, J.J., Fisher, R., Tirtut, A., Field, R., Ioup, G.E., Ioup, J.W., Raybon, G.H., Kuczaj, S., Caruthers, J., Goodman, R., and Sidorovskaia, N.A. (2002). "Modeling and Measuring the Acoustic Environment of the Gulf of Mexico," *Proceedings of 21-st Annual Gulf of Mexico Information Transfer Meeting*, pp.509-521 (**invited talk**, January 2002)
 27. Sidorovskaia, N.A. (1997). "Time-domain study of acoustic pulse propagation in an ocean waveguide using a new normal mode model," *Ph.D. Dissertation, University of New Orleans, May 1997*.
 28. Sidorovskaya, N.A. and Khil'ko, A.I. (1995). "Partially coherent acoustic images in layered refractive waveguides," *Izvestiya Vysshikh Uchebnykh Zavedenii, Radiofizika (Russia)* **38**(1-2), 127-133. [English transl.: *Radiophysics and Quantum Electronics (USA)* **38**(1-2), 85-88 (1995)].
 29. Antonets, M.A., and Sidorovskaya, N.A. (1993). "Estimation of Random-Signal-Source characteristics by field measurement," *Izvestiya Vysshikh Uchebnykh Zavedenii, Radiofizika (Russia)* **36** (8), 836-839. [English transl.: *Radiophysics Quantum Electron. (USA)* **36** (8), 573-575 (1993)].
 30. Bepalov, P.A., and Sidorovskaya, N.A. (1992). "Dimension of ELF-chorus," *"Geomagnetism and Aeronomy," vol. 32*, No 1, pp. 152-155, Moscow, "Nauka", 1992 (in Russian and translated in English).

MAGAZINES, PROCEEDINGS, AND REPORTS

1. Amaral, J., Ampela, K., Bailey, H., Bell, R., Bhattarai, K., Deakos, M., Dugan, P., Frankel A., Fergosi, S., Khan, A., Klinck, H., Mathew, N., Miller, J., Mellinger, D., Rice, A., Ponirakis, D., Poty, G., Sidorovskaia, N., Lin, Y.T., Van Uffelen, L. (2022). Passive Acoustic Monitoring

- Program for the Northern Gulf of Mexico – Project Report. Prepared for the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. 437pp. OCS Study BOEM: 2022. Contract No.: M17PC00001 to HDR.
2. Sidorovskaia, N., and Li, K. (2022). Seismic source characterization study for the Northern Gulf of Mexico – 2007 Report to the Sound and Marine Life Joint Industry Programme, 112 p.
 3. Latusek-Nabholz, J.N., Whitt, A.D., Fertl, D., Gallien, D.R., Ampela, K., Khan, A.A, Sidorovskaia, N. (2020). Literature synthesis on passive acoustic monitoring projects and sound sources in the Gulf of Mexico. New Orleans (LA): US Department of the Interior, Bureau of Ocean Energy Management. Contract No.: M17PC00001. OCS Study BOEM 2020-009. 99 pp. (https://espis.boem.gov/final%20reports/BOEM_2020-009.pdf)
 4. Sidorovskaia, N. (2020). Assessment of ocean ambient sound levels in the northern Gulf of Mexico, November 2019 – June 2020: autonomous Environmental Acoustic Recording System (EARS) buoys. Preliminary Data processing Report. Prepared for the Bureau of Ocean Energy Management (BOEM), United States Department of the Interior under Contract No. M17PC00001, Task Order M17PD00011, issued to HDR Inc., Vienna, VA, USA. Prepared by University of Louisiana at Lafayette, Lafayette, LA, USA. November 2020, 41 pp.
 5. Sidorovskaia, N., and Bhattarai, K. (2020). Assessment of ocean ambient sound levels in the northern Gulf of Mexico, April 2019 – November 2019: autonomous Environmental Acoustic Recording System (EARS) buoys. Preliminary Data processing Report. Prepared for the Bureau of Ocean Energy Management (BOEM), United States Department of the Interior under Contract No. M17PC00001, Task Order M17PD00011, issued to HDR Inc., Vienna, VA, USA. Prepared by University of Louisiana at Lafayette, Lafayette, LA, USA. March 2020, 44 p.
 6. Sidorovskaia, N., and Bhattarai, K. (2019). Assessment of ocean ambient sound levels in the northern Gulf of Mexico, October 2018 – April 2019: autonomous Environmental Acoustic Recording System (EARS) buoys. Preliminary Data processing Report. Prepared for the Bureau of Ocean Energy Management (BOEM), United States Department of the Interior under Contract No. M17PC00001, Task Order M17PD00011, issued to HDR Inc., Vienna, VA, USA. Prepared by University of Louisiana at Lafayette, Lafayette, LA, USA. November 2019, 39 p.
 7. Sidorovskaia, N., and Bhattarai, K. (2019). Assessment of ocean ambient sound levels in the northern Gulf of Mexico, May 2018 – October 2018: autonomous Environmental Acoustic Recording System (EARS) buoys. Preliminary Data processing Report. Prepared for the Bureau of Ocean Energy Management (BOEM), United States Department of the Interior under Contract No. M17PC00001, Task Order M17PD00011, issued to HDR Inc., Vienna, VA, USA. Prepared by University of Louisiana at Lafayette, Lafayette, LA, USA.
 8. Sidorovskaia, N. 2019. Eavesdropping on the Gulf of Mexico. Environment Coastal & Offshore, Special Issue “Ocean Sound”, 68-71
 9. Sidorovskaia, N., Comeaux, D., Greenhow, D., Griffin, S., Heimlich, S., Pierpoint, C., Richter, C., and Scala, L. (2017). Proc. LADC-GEMM 2017 Gulf of Mexico Experiment. Lafayette, LA (LADC-GEMM), 61 p.
 10. Sidorovskaia, N., Griffin, S., and Richter, C., 2016. *Proc. LADC-GEMM 2016 Gulf of Mexico Experiment. Part III: Long-Term Mooring Deployment Cruise*. Lafayette, LA (LADC-GEMM), 16 p.
 11. Sidorovskaia, N., Ames, A., Fuselier, J., Greenhow, D., Griffin, S., Heath, B., Lingsch, B., Marks,

- K., Ninke, T, Pierce, S., Pierpoint, C., Richter, C., Royston, J., Rutter, D., Scala, L., and Seward, G. (2015). Proc. LADC-GEMM 2015 Gulf of Mexico Experiment. Lafayette, LA (LADC-GEMM), 50 p.
12. Sidorovskaia, N., Griffin, S., Kusel, E., and Richter, C. (2015). Proc. LADC-GEMM 2015 Gulf of Mexico Experiment. Part II: Recovery Cruise. Lafayette, LA (LADC-GEMM), 24p.
 13. Dyer, S., Pierpoint, C., Sidorovskaia, N. (2015). "ASVs for Passive Acoustic Monitoring: Keeping Track of Marine Wildlife in the Gulf Post-Deepwater Horizon," *Sea Technology*, October 2015, 15-18
 14. Малеханов, А.И., Бородина, Е.Л., Сидоровская, Н.А., Смирнов, И.П., and Хилько, А.И. (2013). "Формирование устойчивых пространственно-временных структур при распространении широкополосных импульсов в океанических волноводах и их разрушение за счет рассеяния на неоднородностях," [Alexander I. Malekhanov, Natalia A. Sidorovskaia, Alexander I. Khil'ko, Elena L. Borodina¹, Ivan P. Smirnov. "Formation of stable space-time structures at propagation of broadband pulses in oceanic waveguides and their destruction at the scattering on randomly distributed inhomogeneities."] In "Ocean acoustics", *Proceedings of the XIV th L.M. Brekhovskikh's conference*, Москва, ГЕОС 2013 г., pp. 384-387 [In Russian with summary translated in English]
 15. Сидоровская, Н.А., Ioup, G.E., Ioup, J.W., Tashmukhambetov, A.M., Ekimov, A.E. (2011). "Использование пассивных акустических методов для изучения влияния индустриальной деятельности человека на морскую мегафауну", [N.A. Sidorovskaia, G.E. Ioup, J.W. Ioup, A.M. Tashmukhambetov, A.E. Ekimov, " Using passive acoustic methods to study anthropogenic noise impact on oceanic megafauna,"] In "Ocean acoustics", *Proceedings of the XIII th L.M. Brekhovskikh's conference*, Москва, ГЕОС 2011 г., pp. 270-276 [In Russian with summary translated in English]
 16. Ioup, G.E., Ioup, J.W., Pflug, L.A., Tashmukhambetov, A.M., Sidorovskaia, N.A., Schexnayder, P., Tiemann, C.O., Bernstein, A., Kuczaj, S.A... Rayborn, G.H., Newcomb, J.J., Carlson, R., and Ekimov, A.E. (2009). "EARS Buoy Applications by LADC: I. Marine Animal Acoustics," *Proceedings of the OCEANS 2009 MTS/IEEE BILOXI Conference*, ISBN CD-ROM: 978-0-933957-38-1, 9 pages, 2009
 17. Newcomb, J.J., Tashmukhambetov, A.M., Ioup, G.E., Ioup, J.W., Sidorovskaia, N.A., Stephens, J.M., Rayborn, G.H., and Summerfield, P. (2009). "EARS Buoy Applications by LADC: II. 3-D Seismic Airgun Array Characterization," *Proceedings of the OCEANS 2009 MTS/IEEE BILOXI Conference*, ISBN CD-ROM: 978-0-933957-38-1, 7 pages, 2009
 18. Rosenfield, D. A., Caruthers, J. W., Nechaev, D. A., Sidorovskaia, N. A., Ioup, G. E., Ioup, J. W., and Yaremchuk, M. I. (2009) "Using Acoustic Tomography to Monitor Deep Ocean Currents in the Eastern Gulf of Mexico," *Proceedings of the OCEANS 2009 MTS/IEEE BILOXI Conference*, ISBN CD-ROM: 978-0-933957-38-1, 3 pages, 2009
 19. Sidorovskaia, N.A. (2003) "Waveguide propagation modeling and its applications," in *Proceedings of the First Workshop on Information and Systems Technology*, (New Orleans, UNO, May 2003).
 20. Sidorovskaia, N.A. (2003) "A new normal mode program SWAMP as a tool for modeling scattering effects in oceanic waveguides," in *Modelling and Experimental Measurements in Acoustics III*, edited by D. Almoza, C.A. Brebbia, R.Hernandez, WIT Press 2003, pp. 267-275.
 21. Sidorovskaia, N.A., Udovychenkov, I.A., Caruthers, J.W., Kamenkovich, V., and Ioup, G.E. (2002). "Acoustic Pulse Propagation Studies in the Gulf of Mexico," in *Proceedings of OCEANS2002 MTS/IEEE Conference and Exhibition*, pp. 1434-1437 (October 29-31, 2002, Biloxi, MS)

22. Sidorovskaia, N.A. (2001) "A New Numerical Technique for the Unification of Propagation and Scattering Problems in Underwater Acoustics," *Proceedings of IMECE2001: 2001 ASME International Mechanical Engineering Congress and Exposition, NCA-Vol. 28*, pp. 281-287, November 11-16, 2001, New York, NY
23. Sidorovskaia, N.A., Schneider, J.M. (2000). "Risk-reducing technique in seismic interpretation," *Proceedings of the Fifth European Conference on Underwater Acoustics, ECUA 2000, Lyon, France, 10-13 July, 2000*, Ed.: Manell E. Zakharia, vol. 1, pp. 257-262.
24. J.M. Schneider and N.A. Sidorovskaia, "Illumination Studies for Imaging Subsalt Anomalies," *Proceedings of Offshore Technology Conference, Houston, TX, 3-6 May, 2000* (paper#: OTC 11983).
25. N. A. Sidorovskaia, E. S. Lockard, and Rod Stafford, "Some Aspects of Time-to-Depth Conversion for Depth Imaging," *Proceedings of Offshore Technology Conference, Houston, TX, 3-6 May, 1999*, vol. 1, pp. 815-822.
26. Natalia A. Sidorovskaia and Emmitt S. Lockard, "Velocity Dispersion as a Tool for Reservoir Imaging," *Proceedings of the Sixth Latin American and Caribbean petroleum Engineering Conference, Caracas, Venezuela, 21-23 April, 1999*.
27. N. A. Sidorovskaia and M. F. Werby, "Broadband Pulse Signals and the Characterization of Shallow Water Oceanic Properties," *Proceedings of SPIE - Int. Soc. Opt. Eng., Orlando, FL, 19-21 April, 1995*, 2485, pp. 97-108.
28. Sh. Fiks, N.A. Sidorovskaia, and V.I. Turchin, "Measurements of complex moving broad band acoustic radiators using near-field technique," *Proceedings of the 2nd European Conference on Underwater Acoustics, Copenhagen, Denmark, July 4-8, 1994*, vol. 2, pp.745-750
29. Sh. Fiks, N.A. Sidorovskaia, and V.I. Turchin, "Diagnostics of noise acoustic sources," *Journal de Physique IV, Vol. 4, Colloque C5, Supplement au Journal de Physique III, 5*, pp. C5-1109-C5-1111, France, May 1994.
30. Sh. Fiks, N.A. Sidorovskaia, and V.I. Turchin, "Reconstruction of spatial-time structure of complex acoustical sources from near-field measurements," *Proceedings of the Third International Congress on Air- and Structure-Borne Sound and Vibration, Montreal, Canada, June 13-15, 1994*, ed. by M.J. Crocker, pp. 1701-1708.
31. N.A. Sidorovskaia, I.Sh. Fiks, and V.I. Turchin, "Remote sensing of moving sources with complex spatial-time structure," *Proceedings of SPIE - Int. Soc. Opt. Eng., Orlando, FL, 6-7 April, 1994*, 2234, pp. 169-177.
32. N.A. Sidorovskaya, V.I. Turchin, "Time-Spatial Processing of Near-Field Measurements," *Proceedings of Quatorzieme Colloque GRETSI, Juan-Les-Pins, France*, pp. 301-304, 1993 (in English).
33. N.A. Sidorovskaya, V.I. Turchin, and I. Sh. Fiks, "Monitoring of moving noise acoustical sources," *Proceedings of II Session of Russian Acoustical Society, Moscow, 1993* (in English).
34. M.A. Antonets and N.A. Sidorovskaya, "Estimation of random signal source characteristics by field measurement," *Proceedings of the International Scientific School-Seminar, University of Nizhny Novgorod*, pp. 189-190, 1992 (in English).

ABSTRACTS (* indicates student's presentation)**2021-current**

- Sidorovskaia, N., Waxler, R., Hetzer, C.H., Liang, B. (2025). Weather observations from deepwater soundscapes in the Northern Gulf of Mexico. *The Journal of the Acoustical Society of America* 157 (4), Pt. 2, A371. (188th Meeting of the ASA//ICA25 New Orleans **(invited talk)**)
- Liang, B., Waxler, R., Sidorovskaia, N. (2025). Bayesian inversion for hurricane parameters based on underwater sound levels. *The Journal of the Acoustical Society of America* 157 (4), Pt. 2, A371. (188th Meeting of the ASA//ICA25 New Orleans **(invited talk)**)
- Sidorovskaia, N., Waxler, R., Hetzer, C.H. (2024). Understanding near-surface atmospheric conditions from deep water passive acoustic observations. AGU Fall Meeting, Washington, DC, December 8-13, 2024, S44B-06.
- Richter, C., Acton, G.D., Sidorovskaia, N., Xuan, C., Verosub, K.L. (2024). Paleomagnetic and Rock Magnetic Properties of IODP Site U1389. AGU Fall Meeting, Washington, DC, December 8-13, 2024, PP51E-0585.
- Ciampaglio*, N., Sidorovskaia, N. (2024). Assessing Northern Gulf of Mexico Sperm Whale's (*Physeter macrocephalus*) seasonal patterns using passive acoustic monitoring. *The Journal of the Acoustical Society of America* 156 (4), Pt. 2, A116.
- Sidorovskaia, N., Waxler, R., Mathew, N., and Hetzer, C.H. (2024). Advancements in understanding ocean-sea interactions during tropical cyclones using passive acoustic monitoring from a glider platform. Ocean Sciences Meeting, February 18-23, 2024, New Orleans, LA (A134D-2423).
- Sidorovskaia, N., Waxler, R., Mathew, N., and Hetzer, C.H. (2023). Tropical cyclones' acoustic reconnaissance. *The Journal of the Acoustical Society of America* 154 (4), Pt. 2, A268. (Acoustics 2023, Sydney, Australia, December 4-8 **(invited talk)**)
- Mathew*, N., and Sidorovskaia, N. (2023). Assessing Northern Gulf of Mexico Sperm Whale's (*Physeter macrocephalus*) time budget using passive acoustic monitoring. *J. Acoust. Soc. Am.*, Vol. 154, No. 4, Pt. 2, October 2023. Acoustics 2023, Sydney, Australia, December 4-8, p. A171.
- Richter, C., Acton, G.D., Adesiyun, O., Miller, L., Nichols, M., Sidorovskaia, N., Verosub, K.L., and Xuan, C. (2022). Late Quaternary (0-200 ka) Environmental Magnetic Record of Mediterranean Overflow Water from IODP Site U1389 (Gulf of Cadiz). AGU Fall Meeting, Chicago, IL, December 12-16, 2022, GP42A-0269.
- Mathew*, N., and Sidorovskaia, N. (2022). The Gulf of Mexico Soundscapes During the COVID-19 Pandemic. AGU Fall Meeting, Chicago, IL, December 12-16, 2022, OS35D-1051.
- Sidorovskaia, N., and Mathew, N. (2022) Efficacy of Tropical Cyclones Acoustic Reconnaissance. AGU Fall Meeting, Chicago, IL, December 12-16, 2022, A22G-1751.
- Sidorovskaia, N., and Li, K. (2022). Source Characterization Study 2007: Gulf of Mexico case study. JIP Acoustic Modelling Workshop, June 13-18, 2022, Cambridge, United Kingdom (invited)
- Briner*, R., Sidorovskaia, N., and Mathew, N. (2021). Exploring sperm whale population demographics in the northern Gulf of Mexico using passive acoustic monitoring. The

- Journal of the Acoustical Society of America 150, A47-A47 (2021)
<https://doi.org/10.1121/10.0007582>
- Mathew*, N., and Sidorovskaia, N. (2021). Understanding Gulf of Mexico soundscapes. The Journal of the Acoustical Society of America 150, A51-A51 (2021)
<https://doi.org/10.1121/10.0007596>
- Sidorovskaia, N., and Mathew, N. (2021). COVID-19 impact on the Northern Gulf of Mexico soundscapes. The Journal of the Acoustical Society of America 149, A88-A88 (2021)
<https://doi.org/10.1121/10.0004602>
- Sidorovskaia, N. (2021). Underwater Seismic Exploration Source Characterization - Gulf of Mexico case study. Workshop on Multiple Seismic Activities Offshore: Environmental Impact and Regulations, September 21 to 23, 2021. Brazilian Geophysical Society,
http://sbgf.org.br/ws_seismic/ (invited)

2010-2020

- Guilment, T., Sidorovskaia, N., Li, K., and Socheleau, F.-X. (2020). Sparse representation-based classification of sperm whale clicks from the Gulf of Mexico. Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa, FL, February 3-6, 2020.
- Li, K., Sidorovskaia, N., Guilment, T., Tiemann, C. (2020). Estimation of long-term regional density variations of sperm whales in the Mississippi Canyon area of the Gulf of Mexico from acoustic recordings. Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa, FL, February 3-6, 2020.
- Richter, C., Ariyibi, O., Li, Y.-X., Sidorovskaia, N., and Verosub, K. (2019). Neogene Magnetostratigraphy, Relative Paleointensity, and High-Resolution Magnetic Record of IODP Site U1514 (Mentelle Basin, Australia). AGU Fall Meeting, San Francisco, 9-13 December, 2019, GP51B-0645.
- Sidorovskaia, N., and Li, K. (2019). Understanding the Impact of the 2010 Oil Spill on Deep Diving Marine Mammals. AGU Fall Meeting, San Francisco, 9-13 December, 2019, OS21D-1771.
- Sidorovskaia, N., and Li, K. (2019). Processing seismic source transients to quantify ecosystem impact. The Journal of the Acoustical Society of America 146, 2886,
<https://doi.org/10.1121/1.5137013>
- Sidorovskaia, N.A., Li, K., and Jenkerson, M. 2019. Seismic source characterization experiment. *Book of abstracts, The Effects of Noise on Aquatic Life*, Den Haag, NL, July 7-12, 2019, p. 177
- Guilment, T., Sidorovskaia, N.A., and Li, K. 2019. Modelling the acoustic repertoire of Cuvier's beaked whale clicks. *Book of abstracts, The Effects of Noise on Aquatic Life*, Den Haag, NL, July 7-12, 2019, p. 64
- Guilment, T., Sidorovskaia, N.A., Li, K., Tiemann, C. 2019. Understanding detectability variations for density estimation of marine mammals. The Journal of the Acoustical Society of America 145:3, 1856-1856, <https://doi.org/10.1121/1.5101702>
- Li, K., and Sidorovskaia, N.A. 2019. Detection and classification beaked whale vocalization calls based on unsupervised machine learning algorithm. The Journal of the Acoustical Society of America 145, 1855 (2019); <https://doi.org/10.1121/1.5101700>

- Li, K., and Sidorovskaia, N.A. (2019). Long-term regional abundance trends of deep-diving marine mammals near the oil spill site. Gulf of Mexico Oil Spill and Ecosystem Science Conference, February 4-7, 2019, New Orleans, LA, USA.
- Li, K., and Sidorovskaia, N.A. (2018). A study of beaked whale's regional habitat use near the Deepwater Horizon oil spill site through passive acoustics. AGU Fall Meeting, December 10-14, Washington, DC.
- Sidorovskaia, N., Li, K., Jenkerson, M., Summerfield, P. (2018). 3-dimensional seismic source characterization study. The 3rd Programme Review Meeting of the IOGP E&P Sound & Marine Life Joint Industry Programme. September 9-14, 2018, The Hague, Netherlands.
- Sidorovskaia, N.A, and Li,K. (2018). Unsupervised clustering approach to classify beaked whale's clicks. 8-th DCLDE workshop, Paris, France
- Achi*, P.; Dias, J.; Osunkwo, S.; Udeogu, H.; Zandipour, H.; Sidorovskaia, N. (2018). Comparing Five Machine Learning Techniques for the Classification of Odontocete Acoustic Encounters. 8th DCLDE workshop, Paris, France.
- Sidorovskaia, N.A. (2018). Hybrid Method for Estimating Sperm Whale Regional Abundance Using Data from Fixed and Moving Acoustic Sensors. Ocean Sciences, February 2018, Portland, OR
- Hossain*, M. I., Ackleh, A. S., Tang, T., Sidorovskaia, N., & Li, K. (2018). A new method for estimating the probability of detection of Cuvier beaked whales from passive acoustic data near Gulf of Mexico oil spill site. In Gulf of Mexico Oil Spill & Ecosystem Science Conference 2018. February 5-8, New Orleans, LA
- Li, K., Sidorovskaia, N., & Tiemann, C. (2018). Study of sperm whale's long-term abundance trends in the northern Gulf of Mexico. In Gulf of Mexico Oil Spill & Ecosystem Science Conference 2018. February 5-8, 2018, New Orleans, LA.
- Mahmud*, S., Sidorovskaia, N., Li, K., Pierpoint, C., & Tiemann, C. (2018). Comparing the Performance of Bottom-moored and Unmanned Surface Vehicle Towed Passive Acoustic Monitoring Platforms for Sperm Whale Studies. In Gulf of Mexico Oil Spill & Ecosystem Science Conference 2018. February 5-8, 2018, New Orleans, LA.
- Pierpoint, C., Sidorovskaia, N., Scala, L., & Comeaux, D. (2018). Towed-hydrophone Surveys of the Northern Gulf of Mexico. In Gulf of Mexico Oil Spill & Ecosystem Science Conference 2018. February 5-8, 2018, New Orleans, LA.
- Sidorovskaia, N.A. (2017). 2000-2017 acoustic research in the Gulf of Mexico: approaches, lessons, and look into the future. 42-nd IEEE International Conference on Acoustics, Speech and Signal Processing. March 3-9, 2017, New Orleans, LA **(invited)**
- Mellinger, D.K.; Nieuwirth, S.L.; Heimlich, S.L.; Fregosi, S.; Küsel, E.T.; Siderius, M.; Sidorovskaia, N. (2017). Passive acoustic monitoring in the Northern Gulf of Mexico using ocean gliders. 174th Meeting of the Acoustical Society of America, December 04-08, 2017, New Orleans, LA **(invited)**
- Sidorovskaia, N.A.; loup, J.W. (2017). "George loup's contribution to the Gulf of Mexico acoustic research: paving the path into the future," 174th Meeting of the Acoustical Society of America, 12/04/17-12/08/17, New Orleans, LA **(invited)**
- Mahmud*, S.; Sidorovskaia, N.; Li, K.; Pierpoint, C.; Tiemann, C.; Mellinger, D.K. (2017). "Comparing performance of bottom-moored and unmanned surface vehicle towed

- passive acoustic monitoring platforms for sperm whale detection,” 174th Meeting of the Acoustical Society of America 12/04/17-12/08/17, New Orleans, LA
- Li, K.; Sidorovskaia, N.A.; Tiemann, C.; Ackleh, A. (2017). “Decadal assessment of the sperm whale population trends in the northern Gulf of Mexico using acoustics,” 174th Meeting of the Acoustical Society of America 12/04/17-12/08/17, New Orleans, LA
- Ackleh, A.S.; Chiquet, R.A.; Ma, B.; Tang, T.; Caswell, H.; Veprauskas, A.; Sidorovskaia, N. (2017). Analysis of Lethal and Sublethal Impacts of Environmental Disasters on Sperm Whales Using Stochastic Modeling. Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017, New Orleans, LA
- Ackleh, A.S.; Chiquet, R.A.; Ma, B.; Tang, T.; Caswell, H.; Veprauskas, A.; Sidorovskaia, N. (2017). “Analysis of Lethal and Sublethal Impacts of Environmental Disasters on Sperm Whales Using Stochastic Modeling,” 2017 Joint Mathematics Meetings, 01/04/17-01/07/17, Atlanta, GA
- Li, K.; Sidorovskaia, N.A.; Tiemann, C. (2017). “Development of detection and classification algorithm based on the feature extraction for beaked whales in the northern Gulf of Mexico,” Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017, 02/06/17-02/09/17, New Orleans, LA
- Mahmud*, S.; Sidorovskaia, N.A.; Li, K.; Pierpoint, C.; Tiemann, C.; Mellinger, D.K. (2017). “Comparing performance of bottom-moored, glider, and unmanned surface vehicle towed PAM platforms for marine mammal detection,” Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017 02/06/17-02/09/17 New Orleans, LA
- Mellinger, D.K.; Nieuwirth, S.L.; Heimlich, S.L.; Küsel, E.T.; Siderius, M.; Sidorovskaia, N.A. (2017). “Passive Acoustic Monitoring of Cetaceans in the Northern Gulf of Mexico using Ocean Gliders,” Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017 02/06/17-02/09/17, New Orleans, LA
- Risbourg*, J.; Sidorovskaia, N.A.; Li, K.; Mahmud, S. (2017). “Assessing Beaked and Sperm Whale Movement Patterns Using Acoustics and Environmental Characteristics in the Northern Gulf of Mexico,” Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017, 02/06/17-02/09/17, New Orleans, LA
- Tang*, T.; Ackleh, A.S.; Sidorovskaia, N.; Li, K.; Tiemann, C.; Ioup, J. (2017). “Long term impact assessment of the 2010 oil spill impact on deep diving marine mammals: Beaked whales,” Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017, 02/06/17-02/09/17, New Orleans, LA
- Pierpoint, C.; Comeaux, D.; Scala, L.; Sidorovskaia, N. (2017). “Towed hydrophones Surveys of the Gulf of Mexico using Unmanned Surface Vehicles,” 22nd Biennial Conference on the Biology of Marine Mammals, 10/22/17-10/27/17, Halifax, Nova Scotia, Canada
- Sidorovskaia, N., Li, K., Tiemann, C., Ackleh, A., Tang, T., Risbourg, J. (2016). “Gulf of Mexico soundscapes as indicators of ecological stressors,” AGU Fall Meeting, San Francisco, Dec 12-16, 2016
- Sidorovskaia, N.A. and Li, K. (2016). “Development of unsupervised classifier for beaked whale clicks,” J. Acoust. Soc. Am. (5th Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan in Honolulu, Hawaii, November 28, 2016, in session 1aSP, General Topics in Signal Processing I)

- Sidorovskaia, N.A., Li, K., Tiemann, C., Ackleh, A., Tang, T. (2016). "Long-term spatially distributed observations of deep diving marine mammals in the Northern Gulf of Mexico using passive acoustic monitoring," J. Acoust. Soc. Am. (the 5th Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan in Honolulu, Hawaii, November 29, 2016, in session 2pABb, Anthropogenic Transient Noise Sound Field and Its Effects on Animal Communication II).
- Sidorovskaia, N., Li, K., Tiemann, C. O., Ackleh, A., Tang, T., Ioup, G.E., Ioup, J.W. (2016). PO14H-2902: Long-term Assessment of the 2010 Deepwater Horizon Oil Spill Impact on Deep Diving Marine Mammals. 2016 Ocean Sciences meeting, February 21-26, New Orleans, LA, USA
- Ackleh, A.S.; Chiquet, R. A. ; Ma, B. ; Tang, T.; Caswell, H. ; Sidorovskaia, N Accessing the Impact of Environmental Disasters on Population Dynamics Using Stochastic Matrix Models LA/MS MAA Conference, February 25-27, Shreveport, LA
- Ackleh, A.S., Sidorovskaia, N., Tang, T., Chiquet, R., Ma, B., Tiemann, C., Ioup, W. J., Ioup, E. G. (2016). Assessment of the 2010 oil spill impact on deep diving marine mammals: beaked whales, 2016 Gulf of Mexico oil spill & ecosystem science conference, February 1-4, 2016, Tampa, FL
- Ackleh, A.S., Chiquet, R. A. , Ma, B. , Tang, T., Caswell, H. , Sidorovskaia, N (2016). Accessing the Impact of Environmental Disasters on Population Dynamics Using Stochastic Matrix Models, 2016 Gulf of Mexico oil spill & ecosystem science conference, February 1-4, 2016, Tampa, FL
- Mellinger, D.K; Nieukirk, S.; Heimlich, S.; Sidorovskaia, N.; Pierpoint, C. (2016). Acoustic Assessment of Cetacean Population Responses to the Deepwater Horizon Oil Spill. 2016 Gulf of Mexico oil spill & ecosystem science conference, February 1-4, 2016, Tampa, FL **(invited)**
- Sidorovskaia, N.; Li, K., Tiemann, C.O., Ackleh, A., Tang, T., Ioup, G.E., Ioup, J.W. (2016). Automated Detection and Classification Algorithm for Beaked Whales in the Northern Gulf of Mexico 2016 Gulf of Mexico oil spill & ecosystem science conference, February 1-4, 2016, Tampa, FL.
- Sidorovskaia, N.A., Li, K., Tiemann, C.O., Ackleh, A., Tang, T., Ioup, G.E., Ioup, J.W. OS13A-2024: Targeted Acoustic Data Processing for Ocean Ecological Studies, AGU Fall Meeting, San Francisco, Dec 14-18, 2015
- Sidorovskaia, N.A., Li, K., Ackleh, A., Tang, T., Tiemann, C.O., Ioup, J.W., Ioup, G.E. Classification of beaked whale and dolphin clicks measured by environmental acoustic recording system buoys in the northern Gulf of Mexico, Meeting of the Acoustical Society of America, Jacksonville, FL, Nov. 02-06, 2015
- Natalia Sidorovskaia, Baoling Ma, Azmy S. Ackleh, Christopher O. Tiemann, Juliette W. Ioup and George E. Ioup (2014). "Acoustic Studies of the Effects of Environmental Stresses on Marine Mammals in Large Ocean Basins," presented as a poster (OS21C-1155) at the AGU meeting, 15-19 December 2014, San Francisco, CA
- Carl Richter, Lindsey Horton, Gary Acton, Natalia Sidorovskaia, Francisco Sierro, Chuang Xuan, Kenneth Verosub (2014). "Relative Geomagnetic Paleointensity, Environmental Magnetism, and Cyclicity of Contourites from the West Iberian Margin (IODP Site

- U1389),” presented as a poster (GP23B-3686) at the AGU meeting, 15-19 December 2014, San Francisco, CA
- Juliette W. loup, George E. loup, Christopher O. Tiemann, Natalia A. Sidorovskaia and Arslan M. Tashmukhambetov (2013). “Identification of individual beaked whales in the northern Gulf of Mexico,” J. Acoust. Soc. Am. 134, 3986 (2013), <http://dx.doi.org/10.1121/1.4830528>
- Natalia Sidorovskaia, Azmy S. Ackleh, Christopher O. Tiemann, Juliette W. loup and George E. loup (2013). “Prospects for short-term and long-term passive acoustic monitoring of environmental change impact on marine mammals,” J. Acoust. Soc. Am. 134, 4176 (2013), <http://dx.doi.org/10.1121/1.4831308>
- Arslan M. Tashmukhambetov, George E. loup, Juliette W. loup, Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, Grayson H. Rayborn and Phil Summerfield (2013). “Three-dimensional primary acoustic field characterization for a seismic airgun array,” J. Acoust. Soc. Am. 134, 4113 (2013), <http://dx.doi.org/10.1121/1.4831104>
- Natalia Sidorovskaia, Carl Richter, and Irina Rypina (2013). Deterministic chaos in geomagnetic reversals, presented as a poster (GP53C-1142) at the AGU 2013 meeting, San Francisco, CA
- Fatemeh Karbalaei Saleh*, James Martin, Natalia Sidorovskaia, Carl Richter, and William A. Hollerman (2013). “Paleomagnetism, rock magnetism, and PIXE Analysis of Oligocene-Miocene sediments (Bennett County, South Dakota),” presented as a poster (GP43A-1170) at the AGU 2013 meeting, San Francisco, CA
- Natalia Sidorovskaia, Azmy Ackleh, Baoling Ma, Christopher Tiemann, Juliette W loup, and George E loup, “Using an autonomous passive acoustic observational system to monitor the environmental impact of the Gulf of Mexico oil spill on deep-diving marine mammals,” AGU Fall meeting, December 3-7 2012.
- Natalia Sidorovskaia, Azmy Ackleh, Christopher Tiemann, Juliette loup, and George loup, “Comparison of the first-year response of beaked and sperm whale populations to the Northern Gulf oil spill based on passive acoustic monitoring,” J. Acoust. Soc. Am. **132**, 2009 (2012)
- Arslan M. Tashmukhambetov*, George E. loup, Juliette W. loup, Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, Grayson H. Rayborn, and Phil Summerfield, “The measured 3-D primary acoustic field of a seismic airgun array,” J. Acoust. Soc. Am. **132**, 2056 (2012)
- Arslan M. Tashmukhambetov*, George E. loup, Juliette W. loup, Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, Grayson H. Rayborn, and Phil Summerfield, “Experimental determination of the three-dimensional primary field of a seismic airgun array,” J. Acoust. Soc. Am. 129 (4), pp. 2602 (2011). Program abstracts of the 161st meeting of the Acoustical Society of America
- George E. loup, Juliette W. loup, Christopher O. Tiemann, and Natalia A. Sidorovskaia, “Complementary techniques for robust acoustic identification of individual sperm and beaked whales,” J. Acoust. Soc. Am. 129 (4), pp. 2602-2602 (2011). Program abstracts of the 161st meeting of the Acoustical Society of America
- Natalia Sidorovskaia, Azmy Ackleh2, Nabendu Pal, Juliette W. loup, George E. loup, and Christopher O. Tiemann. “Using acoustic cue statistics in matrix population models to

- study short-term and long-term marine mammal population dynamics in the northern Gulf of Mexico," *J. Acoust. Soc. Am.* 129 (4), pp. 2372-2372 (2011). Program abstracts of the 161st meeting of the Acoustical Society of America
- Sidorovskaia, Natalia, Ackleh, Azmy S., Ma, Baoling, Tiemann, Christopher, loup, George E., loup, Juliette W. "Long-term acoustic monitoring of marine mammal response to the 2010 oil spill in the Northern Gulf of Mexico," *The Journal of the Acoustical Society of America*, 130(4), p. 2537 (2011). Program abstracts of the 162nd meeting of the Acoustical Society of America.
- Jerald W. Caruthers, Natalia A. Sidorovskaia and Kurt Hansen (2010). "Projections on acoustic techniques and strategies in the Deepwater Horizon response and beyond," *J. Acoust. Soc. Am.* 128 , 2383. 160th ASA Meeting/7th Iberioamerican Congress of Acoustics, 17 th Mexican Congress on Acoustics, Cancun, Mexico, 15-19 November 2010 (2010) **(invited)**
- Natalia Sidorovskaia, Christopher O. Tiemann, George E. loup, and Juliette W. loup, "Passive acoustic monitoring to assess marine mammal population trends in vicinity of the Deepwater Horizon oil spill," *J. Acoust. Soc. Am.* 128(4) Pt.2, 160th ASA Meeting/7th Iberioamerican Congress of Acoustics, 17 th Mexican Congress on Acoustics, Cancun, Mexico, 15-19 November 2010, p. 2384 (2010) **(invited)**
- Natalia Sidorovskaia, "Modeling of broadband acoustic energy evolution in dynamic ocean environments using high-performance computing resources," *J. Acoust. Soc. Am.* 128(4) Pt.2, 160th ASA Meeting/7th Iberioamerican Congress of Acoustics, 17 th Mexican Congress on Acoustics, Cancun, Mexico, 15-19 November 2010, p. 2334 (2010)
- Natalia Sidorovskaia, Christopher O. Tiemann, George E. loup, and Juliette W. loup, "Integrating techniques for identifying individual sperm whales acoustically," *J. Acoust. Soc. Am.* 128(4) Pt.2, 160th ASA Meeting/7th Iberioamerican Congress of Acoustics, 17 th Mexican Congress on Acoustics, Cancun, Mexico, 15-19 November 2010, p. 2299 (2010)
- Sidorovskaia, N., P. Schexnayder, G. E. loup, J. W. loup, C. O. Tiemann, A. Ekimov, J. Sabatier **(2010)**. "Contextual rhythmic analysis of beaked whale clicks for passive acoustic identification," *J. Acoust. Soc. Am.*, **127** (3) Pt. 2, 159th ASA Meeting/NOISE-CON, Baltimore, Maryland, 19-23 April, 2010, p. 2004 **(invited talk)**.
- loup, G. E., J. W. loup, L. A. Pflug, C. O. Tiemann, N. A. Sidorovskaia **(2010)**. "Using click change detection to modify cluster analysis for acoustically identifying individual sperm whales with changing aspect," *J. Acoust. Soc. Am.*, **127** (3) Pt. 2, 159th ASA Meeting/NOISE-CON, Baltimore, Maryland, 19-23 April, 2010, p. 2004 **(invited talk)**.
- loup, J.W., George E. loup, Lisa A. Pflug, Natalia A. Sidorovskaia, Philip Schexnayder, Christopher O. Tiemann, and Alan Bernstein **(2010)**. "Acoustic Identification of individual beaked whales using self-organizing maps for automated classification of clicks in Littoral Acoustic Demonstartioon Center (LADC) data," *J. Acoust. Soc. Am.*, **127** (3) Pt. 2, 159th ASA Meeting/NOISE-CON, Baltimore, Maryland, 19-23 April, 2010, p. 2004 **(invited talk)**.
- loup, J.W., George E. loup, Lisa A. Pflug, Natalia A. Sidorovskaia, Christopher O. Tiemann, and Charles Thompson **(2010)**. "Clustering classification methods for acoustic applications including the analysis of clicking whale data," *J. Acoust. Soc. Am.*, **127** (3) Pt. 2, 159th ASA Meeting/NOISE-CON, Baltimore, Maryland, 19-23 April, 2010, p. 2042 **(invited talk)**.
- Tashmukhambetov*, Arslan M., George E. loup, Juliette W. loup, Natalia A. Sidorovskaia, Anca Niculescu, Joal J. Newcomb, James M. Stephens, Grayson H. Rayborn, and Phil

Summerfield (2010). "The three-dimensional acoustic field of primary arrivals from a seismic airgun array," *J. Acoust. Soc. Am.*, **127** (3) Pt. 2, 159th ASA Meeting/NOISE-CON, Baltimore, Maryland, 19-23 April, 2010, p. 1787.

2000-2009

- Ioup, G. E., J. W. Ioup, L. A. Pflug, C. O. Tiemann, A. Bernstein, N. A. Sidorovskaia (2009). "Identifying individual clicking whales acoustically I: From click properties," *J. Acoust. Soc. Am.*, **126** (4) Pt. 2, ASA Fall 2009 Meeting, San Antonio, TX, October 26-30, 2009, 2165. **(invited talk)**
- Sidorovskaia, N., P. Schexnayder, G. E. Ioup, J. W. Ioup, C. O. Tiemann, A. Bernstein, A. Ekimov, J. Sabatier (2009). "Identifying individual clicking whales acoustically II: From click rhythms," *J. Acoust. Soc. Am.*, **126** (4) Pt. 2, ASA Fall 2009 Meeting, San Antonio, TX, October 26-30, 2009, 2165 **(invited talk)**.
- Anca M. Niculescu, Natalia A. Sidorovskaia, Peter Achi, Arslan M. Tashmukhambetov, George E. Ioup, and Juliette W. Ioup, "Use of high performance computing resources for underwater acoustic modeling," *J. Acoust. Soc. Am.*, **126** (4) Pt. 2, ASA Fall 2009 Meeting, San Antonio, TX, October 26-30, 2009, 2250
- Arslan M. Tashmukhambetov, George E. Ioup, Juliette W. Ioup, Natalia A. Sidorovskaia, Anca Niculescu, Joal J. Newcomb, James M. Stephens, Grayson H. Rayborn, and Phil Summerfield, "Three-dimensional data analysis for acoustic measurements of a seismic airgun array," *J. Acoust. Soc. Am.*, **126** (4) Pt. 2, ASA Fall 2009 Meeting, San Antonio, TX, October 26-30, 2009, 2250
- Juliette W. Ioup, George E. Ioup, Lisa A. Pflug, Arslan M. Tashmukhambetov, Christopher O. Tiemann, Alan Bernstein, Natalia A. Sidorovskaia and Philip Schexnayder, "Localization to verify the identification of individual sperm whales using click properties," *J. Acoust. Soc. Am.*, **125** (4) Pt. 2, ASA Spring 2009 Meeting, Portland, Oregon, April 2009, 2616
- Natalia Sidorovskaia, Philip Schexnayder, Alexander Ekimov, James Sabatier, George E. Ioup, and Juliette W. Ioup, "Rhythmic analysis of sperm whale broadband acoustic signals," *J. Acoust. Soc. Am.*, **125** (4) Pt. 2, ASA Spring 2009 Meeting, Portland, Oregon, April 2009, 2738
- George E. Ioup, Juliette W. Ioup, Arslan M. Tashmukhambetov, Lisa A. Pflug, Joal J. Newcomb, Natalia A. Sidorovskaia, "Environmental acoustic recording system (EARS) buoys for marine animal acoustics," *J. Acoust. Soc. Am.*, **125** (4) Pt. 2, ASA Spring 2009 Meeting, Portland, Oregon, April 2009, 2616 **(invited talk)**
- Arslan M. Tashmukhambetov, George E. Ioup, Juliette W. Ioup, Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, and Grayson H. Rayborn, "Source characterization study 2007: The three-dimensional primary field of a seismic airgun array," *J. Acoust. Soc. Am.*, **125** (4) Pt. 2, ASA Spring 2009 Meeting, Portland, Oregon, April 2009, 2539
- Sidorovskaia, Natalia, Philip Schexnayder, George E. Ioup, Juliette W. Ioup, Christopher O. Tiemann, James Sabatier, Alexander. Ekimov (2009). "Integrated passive acoustic approach for detection, localization, and identification of individual marine mammals as applied to Workshop data," 4th International Workshop on Detection, Classification and Localization of Marine Mammals Using passive Acoustics and 1st International Workshop

- on Density Estimation of Marine Mammals Using Passive Acoustics, University of Pavia, Italy, Cairoli College, September 2009, p.36.
- George E. Ioup, Juliette W. Ioup, Lisa A. Pflug, Arslan M. Tashmukhambetov, Natalia A. Sidorovskaia, Charles Thompson, and Christopher O. Tiemann, "Identifying individual clicking whales acoustically amid the clutter of other clicking whales," *J. Acoust. Soc. Am.* **124 (4(2))**, p. 2500, October 2008. (The 156th Acoustical Society of America meeting, November 10-14, 2008, Miami, Florida) (**invited**)
- Arslan Tashmukhambetov, Natalia A. Sidorovskaia, George E. Ioup, Juliette W. Ioup, "Modeling the three-dimensional field of seismic airgun array and comparison to 2003 measured data," *J. Acoust. Soc. Am.* **124 (4(2))**, p. 2599, October 2008. (The 156th Acoustical Society of America meeting, November 10-14, 2008, Miami, Florida)
- Arslan Tashmukhambetov, George E. Ioup, Juliette W. Ioup, , Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, and Grayson H. Rayborn, "The characterization study 2007: A detailed three dimensional acoustic field measurements of a seismic airgun array," *J. Acoust. Soc. Am.* **124 (4(2))**, p. 2599, October 2008. (The 156th Acoustical Society of America meeting, November 10-14, 2008, Miami, Florida)
- Natalia Sidorovskaia, Arslan Tashmukhambetov, George E. Ioup, and Juliette W. Ioup, "Using parallel programming and a three-dimensional visualization cave to map the acoustic energy distribution from a seismic array in the ocean," *J. Acoust. Soc. Am.* **123** 3942 (2008) (The Joint Meeting of Acoustical Society of America meeting and European Acoustical Society, May 2008, Paris, France)
- Natalia A. Sidorovskaia, "Academic environment and dynamics in response to extreme events: Theory and Practice (Katrina Lessons)," **Invited talk**, 2008 APS March Meeting, March 10–14, 2008, New Orleans, Louisiana
- Arslan M. Tashmukhambetov, George E. Ioup, Juliette W. Ioup, and Natalia A. Sidorovskaia, "Modeling surface duct precursors for Littoral Acoustic Demonstration Center 2003 (LADC03) seismic calibration experiment," *J. Acoust. Soc. Am.* **122 (5(2))**, p. 2942, November 2007. (The 154th Acoustical Society of America meeting, 27 November – 1 December, 2007, New Orleans, Louisiana)
- George E. Ioup, Juliette W. Ioup, Lisa A. Pflug, Arslan M. Tashmukhambetov, and Natalia A. Sidorovskaia, "Acoustic identification of beaked and sperm whales," *J. Acoust. Soc. Am.* **122 (5(2))**, p. 3003, November 2007. (The 154th Acoustical Society of America meeting, 27 November – 1 December, 2007, New Orleans, Louisiana)
- George E. Ioup, Juliette W. Ioup, Natalia A. Sidorovskaia, and Arslan M. Tashmukhambetov, "Identifying Individual Sperm and Beaked Whales from the Properties of their Clicks," 3rd International Workshop on the Detection and Classification of Marine Mammals Using Passive Acoustics, 24-26 July 2007, Boston, MA, USA, p.11.
- Natalia A. Sidorovskaia, Arslan M. Tashmukhambetov, George E. Ioup, and Juliette W. Ioup, "Modeling of Sound Exposure Levels for Seismic Exploration Arrays and Comparison with Experimental Measurements," 3rd International Workshop on the Detection and Classification of Marine Mammals Using Passive Acoustics, 24-26 July 2007, Boston, MA, USA, p.22.
- Arslan M. Tashmukhambetov, George E. Ioup, Juliette W. Ioup, Natalia A. Sidorovskaia, Joal J. Newcomb, James M. Stephens, and Grayson H. Rayborn, "Experimental design for

- acoustic characterization of a seismic exploration airgun array ,” *J. Acoust. Soc. Am.* **121**, 3125 (2007) (The 153rd Acoustical Society of America meeting, June 4-June 8, 2007, Salt lake City, Utah)
- Natalia A. Sidorovskaia, Arslan M. Tashmukhambetov, George E. Ioup, and Juliette W. Ioup, “Modeling marine mammal sound exposure maps for seismic exploration airgun arrays ,” *J. Acoust. Soc. Am.* **121**, 3076 (2007) (The 153rd Acoustical Society of America meeting, June 4-June 8, 2007, Salt lake City, Utah)
- J.W. Caruthers, D. Nechaev, D.A. Roman, N.A. Sidorovskaia, G.E. Ioup, J. Ioup, and M.Yaremchuk, "Prospects and Techniques for Eddy-Resolving Acoustic Tomography in the Eastern Gulf of Mexico," *EOS Trans. AGU* 88(23), Jt. Assem. Suppl., Abstract OS51B-07, 2007.
- Natalia A. Sidorovskaia, Blake Richard, George E. Ioup, and Juliette W. Ioup, "Spectral identification of sperm whales from Littoral Acoustic Demonstration Center passive acoustic recordings," *J. Acoust. Soc. Am.* **118 (3(2))**, p. 2001, September 2005. (The 150th Acoustical Society of America meeting, 17-21 October 2005, Minneapolis, Minnesota)
- George E. Ioup, Juliette W. Ioup, Sean A. Chapin, Arslan M. Tashmukhambetov, Joal J. Newcomb, ..., and Natalia A. Sidorovskaia, "Time and frequency analysis of seismic airgun calibration data from an environmental acoustic recording system (EARS) buoy," *J. Acoust. Soc. Am.* **118 (3(2))**, p. 2002, September 2005. (The 150th Acoustical Society of America meeting, 17-21 October 2005, Minneapolis, Minnesota)
- Ildar M. Tamendarov and Natalia A. Sidorovskaia, "Unified acoustic model for simulating propagation and scattering effects in oceanic waveguides," *J. Acoust. Soc. Am.* **116 (4,(2))**, p. 2527, October 2004. (The 148th Acoustical Society of America meeting, November 15-19 2004, San Diego, CA)
- Sergey V. Vinogradov, Jerald W. Caruthers, Hans E. Ngodock, and Natalia A. Sidorovskaia, "A new primitive ray-tracing (PRT) model to computer forward and inverse acoustic propagation in a two-dimensional, range-dependent sound-speed field," *J. Acoust. Soc. Am.* **116 (4,(2))**, p. 2550, October 2004. (The 148th Acoustical Society of America meeting, November 15-19 2004, San Diego, CA)
- Natalia A. Sidorovskaia, George E. Ioup, and Juliette W. Ioup, "Studies of waveguide propagation effects on frequency properties of sperm whale communication signals," *J. Acoust. Soc. Am.* **116 (4,(2))**, p. 2614, October 2004. (The 148th Acoustical Society of America meeting, November 15-19 2004, San Diego, CA)
- Arslan Tashmukhambetov, Natalia A. Sidorovskaia, George E. Ioup, and Juliette W. Ioup, "Modeling of angular and range acoustic energy distribution from seismic exploration array in the Northern Gulf of Mexico," *J. Acoust. Soc. Am.* **116 (4,(2))**, p. 2649, October 2004. (The 148th Acoustical Society of America meeting, November 15-19 2004, San Diego, CA)
- Natalia A. Sidorovskaia, Ilya A. Udovydchenkov, Irina A. Rypina, George E. Ioup, Juliette W. Ioup, etc., "Propagation modeling for sperm whale acoustic clicks in the northern Gulf of Mexico," *J. Acoust. Soc. Am.* **115 (5,(2))**, p. 2556, May 2004. (The 147st Acoustical Society of America meeting, May 24-28 2004, New York, NY)
- George E. Ioup, Juliette W. Ioup, James P. Larue, Natalia A. Sidorovskaia, Stan A. Kuczaj, Grayson H. Rayborn, and Christopher D. Walker, "Spectrogram analysis of low to mid frequency

- marine mammal clicks," *J. Acoust. Soc. Am.* **115 (5,(2))**, p. 2556, May 2004. (The 147st Acoustical Society of America meeting, May 24-28 2004, New York, NY)
- Jerald W. Caruthers, Sergey Vinogradov, Nadya Vinogradova, Natalia A. Sidorovskaia, etc., "Gulf of Mexico oceanography and acoustic-pulse propagation across the DeSoto Canyon," *J. Acoust. Soc. Am.* **114 (4)**, p. 2376, November 2003. (The 146st Acoustical Society of America meeting, November 10-14 2003, Austin, Texas)
- Jerald W. Caruthers, Ralph R. Goodman, and Natalia A. Sidorovskaia, "Statistics of high-resolution backscatter and the detection of spatial changes," *J. Acoust. Soc. Am.* **114 (4)**, p. 2311, November 2003. (The 146st Acoustical Society of America meeting, November 10-14 2003, Austin, Texas)
- Sergey Vinogradov, Jerald W. Caruthers, ..., Natalia A. Sidorovskaia etc., "Physical oceanography and acoustic propagation during LADC experiment in the Gulf of Mexico in 2001," *J. Acoust. Soc. Am.* **113 (4)**, p. 2332, April-May 2003. (The 145st Acoustical Society of America meeting, 28 April-2 May 2003, Nashville, TN)
- J. Newcomb, Robert Fisher, Robert Field, Altan Turgut, George Ioup, Juliette Ioup, Grayson Rayborn, Stan Kuczaj, Jerald Caruthers, Ralph Goodman, and Natalia Sidorovskaia, "Near-bottom hydrophone measurements of ambient noise and sperm whale vocalizations in the northern Gulf of Mexico," *J. Acoust. Soc. Am.* **111**, p. 2371, May 2002. (The 143st Acoustical Society of America meeting, June 2002, Pittsburgh, PA)
- Natalia A. Sidorovskaia, Robert L. Field, Cherul L. Sephus, George E. Ioup, and Juliette W. Ioup, "A comparison of normal mode and parabolic equation range-dependent propagation models as tools for acoustic communication in shallow water," *J. Acoust. Soc. Am.* **109(5)**, Pt. 2, p. 2450, May 2001. (The 141st meeting of the Acoustical Society of America)

1990-1999

- Natalia A. Sidorovskaia and Emmitt S. Lockard, "Seismic Depth Imaging and Remote Sensing of Rock Properties," *J. Acoust. Soc. Am.* **105(2)**, Pt. 2, p.1208, February 1999. (The 137th meeting of the Acoustical Society of America, 2nd Convention of the European Acoustics Association: Forum Acusticum 99 integrating the 25th German Acoustics DAGA Conference, Berlin, Germany, March 1999)
- M.F. Werby and N.A. Sidorovskaia, "Rapid Method to Obtain Normal Mode Eigenvalues in a Layered Ocean," *1998 SIAM Annual Meeting*, July 1998, Toronto, Canada
- M.F. Werby and N.A. Sidorovskaia, "Huygens Principle and a Range-Dependent Adaptive Coupled Normal Mode Method," *1998 SIAM Annual Meeting*, July 1998, Toronto, Canada
- Natalia A. Sidorovskaia and Michael F. Werby, "Interductile energy transfer of high frequency pulse propagation in a two-ducted ocean waveguide in the Yellow Sea," *J. Acoust. Soc. Am.* **101(5)**, Pt. 2, p. 3203, May 1997. (The 133rd meeting of the Acoustical Society of America)
- Natalia A. Sidorovskaia and Michael F. Werby, "Analysis of pulse propagation in range-independent and range-dependent sound channels with double duct," *J. Acoust. Soc. Am.* **101(5)**, Pt. 2, p. 3202, May 1997. (The 133rd meeting of the Acoustical Society of America)
- N.A. Sidorovskaia and M.F. Werby, "Rate of energy transport and arrival times in pulse propagation in a waveguide," *J. Acoust. Soc. Am.* **101(5)**, Pt. 2, p. 3202, May 1997. (The 133rd meeting of the Acoustical Society of America)

- M.F. Werby and N.A. Sidorovskaia, "An adaptive coupled range-dependent normal-mode method," *J. Acoust. Soc. Am.* **101**(5), Pt. 2, p. 3181, May 1997. (The 133rd meeting of the Acoustical Society of America)
- M.F. Werby and N.A. Sidorovskaia, "The generalized eigenvalue problem, warping matrices, and the transformation of an isovelocity environment to a variable velocity environment," *J. Acoust. Soc. Am.* **101**(5), Pt. 2, p. 3181, May 1997. (The 133rd meeting of the Acoustical Society of America)
- M.F. Werby and N.A. Sidorovskaia, "Scattering from objects near the ocean bottom at very frequency and geometrical diffraction theory," *J. Acoust. Soc. Am.* **101**(5), Pt. 2, p. 3065, May 1997. (The 133rd meeting of the Acoustical Society of America)
- M.F. Werby and N.A. Sidorovskaia, "Scattering from elastic axi-symmetric objects in a range-dependent waveguide near surfaces," *J. Acoust. Soc. Am.* **101**(5), Pt. 2, p. 3040, May 1997. (The 133rd meeting of the Acoustical Society of America)
- Michael F. Werby and Natalia A. Sidorovskaia, "The theory and calculation of predicting the scattered signals from elastic spheroidal shells near reflecting and absorbing interfaces," *the 2nd International Conference on Theoretical and Computational Acoustics*, Book of Abstracts, Honolulu, Hawaii, 21-25 August 1995.
- Michael F. Werby and Natalia A. Sidorovskaia, "The prediction of strong bending modes for signals scattered at oblique incidence from elastic spheroidal solids and shells," *the 2nd International Conference on Theoretical and Computational Acoustics*, Book of Abstracts, Honolulu, Hawaii, 21-25 August 1995.
- Natalia A. Sidorovskaia and Michael F. Werby, "Ocean layering models and mode trapping in sublayers for high frequency propagation," *the 2nd International Conference on Theoretical and Computational Acoustics*, Book of Abstracts, Honolulu, Hawaii, 21-25 August 1995.
- Natalia A. Sidorovskaia and Michael F. Werby, "Vertical acoustic profiles and the extraction of ocean properties from broad band pulses in strongly refractive shallow water wave guides," *the 2nd International Conference on Theoretical and Computational Acoustics*, Book of Abstracts, Honolulu, Hawaii, 21-25 August 1995.
- Michael F. Werby and Natalia A. Sidorovskaia, "The existence of waterborne interface waves on curved surface and the explanation of large resonance patterns," *the 2nd International Conference on Theoretical and Computational Acoustics*, Book of Abstracts, Honolulu, Hawaii, 21-25 August 1995.
- M.F. Werby and N.A. Sidorovskaia, "The acoustical background for elastic shells of non spherical objects," *J. Acoust. Soc. Am.* **97** (5), Pt. 2, p. 3399, May 1995.
- Nataly A. Sidorovskaia and Michael F. Werby, "Analysis of spatial-time characteristics of broad-band pulse propagating through ocean sound channels by using shallow water acoustical mode propagation model," *J. Acoust. Soc. Am.* **97** (5), Pt. 2, p. 3317, May 1995.
- M.F. Werby and N.A. Sidorovskaia, "Animations of pulse signals scattering from submerged resonating structures," *J. Acoust. Soc. Am.* **97** (5), Pt. 2, p. 3283-3284, May 1995.
- M.F. Werby and N.A. Sidorovskaia, "A theory for predicting the scattered signals from elastic spheroidal shells near smooth absorbing interfaces," *J. Acoust. Soc. Am.* **97** (5), Pt. 2, p. 3283, 1995.

- N. A. Sidorovskaia, Cleon Dean, and M. F. Werby, "The study of pulse signals from elastic spheroidal shells near reflecting interfaces," *J. Acoust. Soc. Am.* **46** (5), Pt. 2, p.3336-3337, (the 128th Meeting of the ASA, Austin, Texas, November 1994).
- M. F. Werby and N. A. Sidorovskaia, "Do pseudo-Scholte resonances exist?," *J. Acoust. Soc. Am.* **46** (5), Pt. 2, p.3336, (the 128th Meeting of the ASA, Austin, Texas, November 1994).
- M. F. Werby and N. A. Sidorovskaia, "Evidence for the existence of strong bending modes for signals scattered at oblique incidence from spheroidal shells," *J. Acoust. Soc. Am.* **46**(5), Pt. 2, p.3336, (the 128th Meeting of the ASA, Austin, Texas, November 1994).
- N. A. Sidorovskaia, A. I. Khil'ko, and M. F. Werby, "Time-domain propagation of signals in a strongly refractive shallow water wave guide and the extraction of ocean properties," *J. Acoust. Soc. Am.* **46** (5), Pt. 2, p.3354, (the 128th Meeting of the ASA, Austin, Texas, November 1994).
- N. Sidorovskaia and V. Turchin, "Diagnostics of noise broad band acoustical sources from near-field measurements," *J. Acoust. Soc. Am.* **95**(5), Pt. 2, (127th Meeting of the Acoustical Society of America), p. 2894, May 1994.
- N.A. Sidorovskaya, V.I. Turchin, and I.Sh. Fiks, "The estimation of spectral correlation characteristics of moving noise radiators from radiated field," *III Scientific-Technical Conference on "Methods of presentation and processing of random signals and waves", Khar'kov, 1993* (in Russian).
- N.A. Sidorovskaya and V.I. Turchin, "Algorithms of source characteristic reconstruction from near-field measurements," *XXIVth General Assembly of the International Union of Radio Science, Abstracts, Kyoto, Japan, 1993*.
- P.A. Bupalov, N.A. Sidorovskaya, "Fractal dimension estimation of magnetospheric ELF chorus," *"Annales Geophysicae," Suppl.2, vol. 10, p. 344, 1992*.
- M.A. Antonets, S.A. Vugalter, and N.A. Sidorovskaya, "Statistic estimation of noise radiator characteristics by near-field measurements," *Proceedings of the Scientific-Technical Conference, p.114, Kharkov, 1991* (in Russian).

INVITED TALKS AND SEMINARS NOT INCLUDED AS PUBLICATIONS

1. Sidorovskaia, N. (2024). "Northern Gulf of Mexico Passive Acoustic Reconnaissance with the Slocum G3 Glider," oral presentation, UG2 Workshop'24, Sept 10-12, 2024, Ann Arbor, MI
2. Sidorovskaia, N. (2024) MITRE, May 21, 2024 (online)
3. Sidorovskaia, N. (2024) "Understanding ocean-sea interactions during tropical cyclones using passive acoustic monitoring: Gulf of Mexico case study," Invited seminar, Department of Physics, Naval Postgraduate School, Monterey, CA, April 19, 2024
4. Sidorovskaia, N. (2021) "Impact of the COVID-19 pandemic on the Gulf of Mexico soundscapes," Department of Physics, University of New Orleans, November 3, 2021 (online)
5. Sidorovskaia, N. (2021) "Underwater Seismic Exploration Source Characterization - Gulf of Mexico case study," Workshop on Multiple Seismic Activities Offshore: Environmental Impact and Regulation, Sept 21-23, 2021, Brazil (online)
6. Sidorovskaia, N. (2021) "Acoustics is everywhere," Penn State University, June 1, 2021 (online)

7. Sidorovskaia, N. (2019) "Big data paradigm in ocean acoustic ecology," Applications of Big Data and High-Performance Computing in Earth Sciences, AGU Workshop, December 8, 2019
8. Sidorovskaia, N.A. (2019). "Gulf of Mexico soundscapes as indicators of ecological stressors," Department of Physics, East Carolina University, April 12, 2019
9. Sidorovskaia, N.A., and Ackleh, A.S. (2018). Webinar in prep. for Marine Mammal Synthesis Workshop "LADC-GEMM Consortium: Marine Mammal Passive Acoustic Research and Modeling", October 2018
10. Sidorovskaia, N.A., and Ackleh, A. (2018). "LADC-GEMM Consortium: Marine Mammal Passive Acoustic Research and Modeling," GoMRI Webinar for Marine Mammal Synthesis workshop, Lafayette, LA, October 2, 2018.
11. Sidorovskaia, N.A., and Veprauskas, A. (2018). "LADC-GEMM Consortium: Studying the impact of environmental stresses on marine mammals: acoustic monitoring, data analytics, and population models," GoMRI Research Webinar, Lafayette, LA, May 30, 2018.
12. Adesiyun, O., Richter, C., Acton, G., Sidorovskaia, N., Sierro, F., Xuan, C., Verosub, K., 2016: Rock magnetic and paleomagnetic study of sediments from IODP Site U1389 (West Iberian Margin). GSA South-Central Section Meeting, March 22-23, 2016, Baton Rouge, Louisiana.
13. Adesiyun, O., Richter, C., Acton, G., Sidorovskaia, N., Sierro, F., Xuan, C., Verosub, K., 2016. Rock magnetic and paleomagnetic study of sediments from IODP Site U1389 (West Iberian Margin). NSBE Annual Convention, Boston, March 23-27, 2016.
14. New Consortium Presentation, "Littoral Acoustic Demonstration Center – Gulf Ecological Monitoring and Modeling (LADC-GEMM)", Oil Spill Science Conference, Houston, February 2015.
15. Seminar, College of Sciences, UL Lafayette (February 23, 2015)
16. Seminar, Physics Department, UL, Lafayette (February 2015)
17. Seminar, Institute of Applied Physics (Russia), November 2012
18. Seminar, Nizhny Novgorod State University (Russia), November 2012
19. Seminar, LGS, Lafayette, LA, May 2012
20. Seminar, Physics Department, UL Lafayette November 2011
21. Marine Mammal Commission, May 11, 2011 New Orleans
22. Poster, LSU, April 2011
23. Azmy S. Ackleh, Nabendu Pal, Natalia Sidorovskaia , "Modeling Short Term Dynamics of Marine Mammal Populations Near the BP Oil Spill Site (Gulf of Mexico) ," NSF Sponsored Oil Spill Conference in New Orleans, Oct 31 – Nov 2, 2010 (poster presentation)
24. Sidorovskaia, N.A., "Environmental impact assessment of seismic exploration in the ocean using acoustics," Department of Physics, University of New Orleans, April 18, 2007
25. Sidorovskaia, N.A., "Environmental Impact Assessment of Seismic Exploration in the Ocean," SWLGS, October 9, 2007.
26. Sidorovskaia, N.A., "Waveguide Propagation Modeling as a Tool for Processing Experimental Data in Underwater Acoustics," Seminar presented at Physics Department, UL Lafayette, October 25, 2006
27. Sidorovskaia, N.A., "FMCE Testing and Preparation for ILD for the Coming Semester," Seminar presented at AAPT Workshop, Syracuse, NY, June 2006

28. Sidorovskaia, N.A., "Passive acoustics as a tool for environmental impact assessment," Seminar presented at RABS, UL Lafayette, February 06, 2006
29. Natalia A. Sidorovskaia, "Underwater acoustics as a tool for studying environmental impact of human activities in the ocean," Seminar at Southeastern Louisiana University, December 2, 2005
30. Natalia A. Sidorovskaia et al, "Airgun Calibration and Sperm Whale Identification from Gulf of Mexico Acoustic Data," Seminar at the Physics Department, UL Lafayette, November 2, 2005
31. Natalia A. Sidorovskaia, Arslan Tashmukhambetov, Physics Department, UL Lafayette, George Ioup and Juliette Ioup, Physics Department, UNO, "LADC 2003 seismic calibration experiment: Modeling acoustic energy distribution from seismic exploration array," Seminar at the University of New Orleans, Physics Department, April 6, 2005
32. Natalia A. Sidorovskaia, "Littoral Acoustic Demonstration Center (LADC): Assessment of environmental impact of acoustic exploration of the Northern Gulf of Mexico," **Invited seminar** at National Center for Physical Acoustics, Oxford, Mississippi, March 30, 2005
33. S. Vinogradov, J.W. Caruthers, and N.A. Sidorovskaia, "The Use of Tomographic Data in Numeric Simulation of Eddy Propagation into the Northeastern Gulf of Mexico by Assimilations into the Numeric Model," presented at the ASLO/TOS 2004 meeting, Honolulu, Feb. 2004.
34. Joal Newcomb, Robert Fisher, and Robert Field, Naval Research Laboratory-Stennis Space Center, Grayson Rayborn, Stan Kuczaj, Jerald Caruthers, Ralph Goodman, Andrew Wright, Rachel Thames, Chris Walker, and Sergey Vinogradov, University of Southern Mississippi, George Ioup, Juliette Ioup, and James Larue, University of New Orleans, Natalia Sidorovskaia, Ilya Udovydchenkov, and Irina Rypina, University of Louisiana at Lafayette, Mark Snyder, Mike Wild, and Wesley Hillstrom, Naval Oceanographic Office, "Ambient Noise, Propagation, and Sperm Whale Clicks at the LADC Experimental Site," presented at the Minerals Management Service Sperm Whale Seismic Study, Houston, TX, 18-21 Nov 2003 (**invited talk**)
35. Natalia A. Sidorovskaia, "Individualization of Sperm Whales Vocalizations", Invited seminar at Department of Marine Science, The University of Southern Mississippi, Stennis Space Center, April 25, 2003
36. Natalia A. Sidorovskaia, "Ocean acoustic noise and charismatic megafauna," Seminar at Physics Department, UL Lafayette, April 2, 2003
37. Natalia A. Sidorovskaia, "New normal mode simulation code SWAMP and its practical applications," **Invited seminar** at National Center for Physical Acoustics, Oxford, Mississippi, January 23, 2003.
38. Jerald W. Caruthers, Grayson Rayborn, Ralph Goodman, George Ioup, Natalia Sidorovskaia, Robert Field, Joal Newcomb, and Robert Fisher, "Prospects of Ocean Acoustic Tomography of the Gulf of Mexico," presented at Naval Research Laboratory Symposium on Operational Oceanography and Remote Sensing, sponsored by the Alliance for Marine Remote Sensing, London, March 5-7, 2002 (**invited talk**, no publication)
39. Natalia A. Sidorovskaia, "How do we try to solve the inverse problem in oil exploration?", **Invited talk** at Sigma Xi, University of Louisiana at Lafayette Chapter, February 15, 2001
40. Natalia A. Sidorovskaia, "Risk-reducing Techniques in Oil Exploration," Seminar at the Physics Department, The University of Louisiana at Lafayette, January 31, 2001

41. Natalia A. Sidorovskaia, "Modern Approaches in Seismic Depth Imaging," Seminar at the University of New Orleans, Physics Department, March 10, 1999
42. Natalia A. Sidorovskaia and Michael F. Werby, "Ocean layering models and mode trapping in sublayers for high frequency propagation," Seminar at the Woods Hole Oceanographic Institute, July 26, 1995.
43. Natalia A. Sidorovskaia, "Acoustical pulse propagation through ocean channels," Seminar at the University of New Orleans, Physics Department, February 22, 1995.
44. Natalia A. Sidorovskaia and Michael F. Werby, "The propagation of sound in shallow water ducted wave guides to high frequency for both the CW and pulse cases: Discussions of results," Talk at the University of Miami, RSMAS, January 12, 1995.

OPEN-ACCESS DATASETS TO SUPPORT RESEARCH AND EDUCATION

Sidorovskaia, N. (2018) Cruise PE18-28, May 17-24, 2018, LUMCON R/V Pelican, R2R repository

Sidorovskaia, N., and Li, K. (2017). Acoustic detections of cetaceans from bottom-moored Environmental Acoustic Recording System (EARS) buoys in the northern Gulf of Mexico 2017-06-09 to 2017-10-10. Distributed by: Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC), Harte Research Institute, Texas A&M University-Corpus Christi, <https://data.gulfresearchinitiative.org/data/R4.x261.000:0023>, doi:10.7266/n7-4zw6-ap48

Sidorovskaia, N., and Li, K. (2017). Acoustic detections of cetaceans from real-time Environmental Acoustic Recording System (EARS) buoy in the northern Gulf of Mexico 2016-09-10 to 2017-01-31, Distributed by: Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC), Harte Research Institute, Texas A&M University-Corpus Christi, <https://data.gulfresearchinitiative.org/data/R4.x261.000:0027>, doi:10.7266/n7-hs5d-ef17

Sidorovskaia, N., and Li, K. (2017). Beaked whale detections from stage 3 using a three-stage energy detector and classifier in the northern Gulf of Mexico, June-October 2015. Distributed by: Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC), Harte Research Institute, Texas A&M University-Corpus Christi, doi:10.7266/N7V69GNZ

TEACHING/MENTORING EXPERIENCE

Undergraduate Courses

1. Introduction to Physics I (coding: Phys 207, undergraduate level): algebra-based classical mechanics, waves, and thermodynamics for non- science majors,
2. General Physics I (coding: Phys 201, undergraduate level): calculus-based classical mechanics, thermodynamics, and waves for science and engineering majors,

3. Honors General Physics I (coding: Phys 203, undergraduate level): classical and relativistic mechanics, mechanical waves, fluids and heat,
4. General Physics II (coding: Phys 202, undergraduate level): calculus-based electromagnetism theory, optics, and relativistic mechanics for science and engineering majors,
5. Honors General Physics II (coding: Phys 204, undergraduate level):
6. Physics Laboratory II (coding: Phys 216, undergraduate level): experiments illustrating principles in electricity, magnetism, optics, and atomic physics.
7. Classical mechanics I, (coding: Phys 323), includes the development of the distance-learning courses for shared delivery at SELU, UNO, and UL Lafayette (first delivered fall 2011)

Graduate Courses

1. Physical Acoustics (coding: Phys 420 advanced undergraduate and graduate credit): propagation of acoustical waves through matter, incl. vibrational motion, plane waves, reflection and refraction, spherical waves, sound absorption and scattering, sound sources, sonar equation
2. Advanced Mechanics (coding: Phys. 423 advanced undergraduate and graduate credit): Lagrangian and Hamiltonian dynamics of mechanical system,
3. Advanced Electromagnetic Theory (coding: Phys. 424 advanced undergraduate and graduate credit): Maxwell's equations, electromagnetic waves, and the Special Theory of Relativity
4. Computational Physics (coding: Phys. 411 advanced undergraduate and graduate credit): numerical methods in physics, algorithm development in MatLab
5. Topics in Computational Physics "Modern Signal Processing" (coding: Phys. 523 graduate level): matrix theory, statistical analysis, classical spectral estimators, parametric modeling and high-resolution spectral estimators
6. Topics in Computational Physics "Machine Learning" (coding: Phys. 523 graduate level): supervised and unsupervised machine learning algorithms
7. Directed individual studies (coding: Phys. 597/598): computational underwater acoustics, scattering theory, and signal processing topics

Students/Post-doctoral Fellows

Post-Doctoral Research Associates, UL Lafayette

Kun Li (2015-2021)

Thomas Guilment (2018-2020)

Chair, Doctoral Program in Earth and Energy Sciences, UL Lafayette

Naomi Mathew (2020-present)

Chair, Master of Science in Physics, UL Lafayette

Ilya Udovydchenkov, Spring 2003, "Acoustic Modeling Tools in Studying the Gulf of Mexico Environment"

Blake A. Richard, Spring 2005, "Sperm Whale Detection and Classification in Acoustic Data"

Arslan Tashmukhambetov, Spring 2005, "Modeling of Angular and Range Acoustic Energy Distributions from a Seismic Exploration Array in the Northern Gulf of Mexico"

Anca Niculescu, Spring 2010 (Non-Thesis option)

Fatemeh Karbalaei Saleh, Spring 2014, "Paleomagnetism and PIXE Analysis of a Sediment Core from Bennett County, South Dakota"

Sakib Mahmud, Fall 2017, "Comparing the Performance of Bottom-Moored and Unmanned Surfaced Vehicle Towed Passive Acoustic Monitoring Platforms for Marine Mammal Detections"

Bibek Khadka, Spring 2020

Keshab Bhattarai, Spring 2020

Member of the Ph.D. Committee/Ph.D student co-mentoring

S. Vinogradov, December 2004, "The use of Ocean Tomographic Observations in Numeric Simulation of Mesoscale Oceanic Circulation in the Northern Gulf of Mexico," Dissertation, Univ. of Southern Mississippi

Scott McDermott, Computer Science Dept., UL Lafayette

Arslan Tashmukhambetov, July 2009, Department of Physics, UNO

Baoling Ma, Department of Mathematics, UL Lafayette

Tingting Tang, Department of Mathematics, UL Lafayette

Md I Hossain, Department of Mathematics, UL Lafayette

Mentor, REU Programs

Renea Briner (University of Delaware), Summer 2021, NSF-funded "Healthy Streams, Healthy Coasts: An Interdisciplinary Approach to Watershed Science and Education" Research Experiences for Undergraduates program at UL Lafayette

Member, M.S. Thesis Committee

UL Lafayette

Robert Minvielle, Summer 2001, "Measurement of Velocity and Attenuation Coefficient of Acoustic Waves in Marsh Water and Sediment"

Frank Nelson Womack, Fall 2004, "Development of a Drop Tower to Study the Triboluminescence of ZnS:Mn with Attention to Possible Application to Spacecraft"

Ross Fontenot, Spring 2010

Andra Mandru, Spring 2010

Jack Manuel, Summer 2011

Boyko Perfanov, Fall 2012

Alex Sylvester, Fall 2015

Stephen Williams, Spring 2016

Mathbar Raut, Spring 2016

Jacque Meche, Fall 2016

Prasanna Gunawardana, Summer 2016

Kevin Pitre, Fall 2016
Alexander Beck (Geosciences), Fall 2017
Peter Achi, Spring 2018
Brian Dye (Geosciences), Spring 2018
Adam Trahan, Fall 2018
Sonny Osunkwo, Fall 2018
John Miller, Spring 2019
Franziska Duhr, Spring 2023
Md. Rafiqul Sarker, Summer 2023
Michael Umoru, Spring 2024
Joseph Orokhe, Summer 2024
Mohammad Ali Boroumand, Summer 2024
Shuvasish Chowdhury, Projected Spring 2025
Muhammad Ihsan Ibn Rahim, Projected Spring 2025

Department of Life Sciences, Texas A&M University - Corpus Christi

Emily McGhee, Fall 2025 (projected)

Member, Comprehensive Exam Committee

UL Lafayette

Irina Rypina, Spring 2003
Natalia Zhelezina, Spring 2003
Ildar Tamendarov, Spring 2005
Joshua Riner, Spring 2011
Mark Roberts, Spring 2011
Lia Kobakhidze, Fall 2012
Jacque Meche, Spring 2016
Mathbar Raut, Spring 2016
Benjamin Lukk, Summer 2023