

Arthur E. Newhall

Emeritus Research Scholar
Applied Ocean Physics and Engineering
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EDUCATION:

B.S. Mathematics, University of Maine, 1985

PROFESSIONAL EXPERIENCE:

Emeritus Research Scholar, Woods Hole Oceanographic Institution, AOPE Dept., 2020-present.
Sr. Information Systems Specialist, Woods Hole Oceanographic Institution, AOPE Dept., 2014-2020.
Information Systems Specialist, Woods Hole Oceanographic Institution, AOPE Dept., 2003-2013.
Research Specialist, Woods Hole Oceanographic Institution, AOPE Dept., 1997-2003.
Research Associate, Woods Hole Oceanographic Institution, AOPE Dept., 1989-1997.
Research Assistant II, Woods Hole Oceanographic Institution, AOPE Dept., 1987-1989.
Research Assistant, Woods Hole Oceanographic Institution, AOPE Dept., 1985-1987.

PROFESSIONAL AFFILIATIONS:

Acoustical Society of America (ASA), member (1988-present).
Institute of Electrical and Electronics Engineers. (IEEE), member (2007-2020).

AWARDS:

W. M. Marquet Senior Technical Staff Award, March 2014.

RESEARCH INTERESTS:

Underwater acoustics; acoustic propagation modeling; acoustical oceanography; oceanographic and acoustic data analysis; advanced computer programming and administration.

PROFESSIONAL ACTIVITIES:

WHOI group member for ONR's Scientists to Sea Program, 2018-present.
WHOI Information Technology Advisory Committee (ITAC), Chair, 2010-2015.
WHOI Scientific Misconduct Policy revision committee, 2009.
WHOI Summer Student Fellow Program presentations, 2005-2007.
WHOI Mentoring Pilot Program – mentor, 2003-2004.
Woods Hole Unix Users Group, creator and head, 1990-2000.
WHOI Linda Morse-Porteous Award Committee, 1998.
WHOI Staff Training Advisory Committee, 1992-1993.
WHOI Computer Security Advisory Committee, 1992.

SUPERVISION/MENTORING AT WHOI:

Jennifer Johnson, 2020-present
Andy Maffei, Sr. Infosys Sp., 2017-2020
Grace Kwon, Lab Support, 2017-2018
Max Abrams, Lab Support, 2015.
Zoe Chazen, Lab support, 2013.
Munan Xu, Summer Guest Student (JHU), 2013.
Samantha Tufano, Summer Student Fellow (PSU), 2012.
Daniel Wo, Lab support, 2012.
Jamie Budzynkiewicz, Visiting Student (Duke), 2011.
Zack Soule, Lab support, 2011.
Samuel Clark, Lab support, 2010.
Munan Xu Lab support, 2008-2010.
Ellen Gawarkiewicz, Lab support, 2007.
Jason Holmes, Guest Student (BU), 2004-2006.

CRUISE PARTICIPATION:

2019 R/V Tiki XIV, Rodeo, Co-Chief Scientist, Lewes, DE.
2019 R/V Dawn Treader, Fore River Harbor, Weymouth, MA.
2018 R/V Dawn Treader, Fore River Harbor, Weymouth, MA.
2018 R/V Tioga, RODEO, Co-Chief Scientist, Block Island wind farm, Woods Hole MA.
2017 R/V Armstrong, SCEX2017, Woods Hole , MA.
2017 R/V Tioga, MASSCeC Nomans Land, Woods Hole MA.
2017 R/V Tioga, RODEO, Co-Chief Scientist, Block Island wind farm, Woods Hole MA.
2016 R/V Tioga, RODEO, Block Island wind farm, Woods Hole MA.
2012 R/V Sharp, Fish acoustic uncertainty BRC experiment, Lewes, DE
2011 R/V Tioga, Cape Cod Bay right whale monitoring project, Woods Hole, MA.
2009 Shore support, Quantify, predict and exploit uncertainty experiment, Keelung, Taiwan.
2009 R/V Tioga, Nantucket Sound Sholte wave SBIR, Woods Hole, MA.
2008 R/V Tioga, Remus 100 and acoustics integration field work, Woods Hole, MA.
2008 R/V Sharp, New England shelfbreak test II (NEST II), Lewes, DE.
2007 R/V Sharp, New England shelfbreak test I (NEST I), Woods Hole, MA.
2006 R/V Endeavor, R/V Knorr, Shallow water acoustics experiment 2006 (SW06).
2001 F/V FR1, Asian seas international acoustics experiment (ASIAEx01), Kaohsiung, Taiwan.
2000 R/V Oceanus, Shallow water acoustics test (SWAT), Woods Hole, MA.
1997 R/V Endeavor, Primer 4 (winter conditions), Woods Hole, MA.
1996 R/V Endeavor, Primer 3 (summer conditions), Woods Hole, MA.
1995 R/V Oceanus, Shallow water in a random media (SWARM), Woods Hole, MA.
1994 R/V Wecoma, Stress 3, Newport, OR.
1993 R/V Atlantic Surveyor, LEO15 II, Tuckerton, NJ.
1992 R/V Atlantic Surveyor, LEO15 I, Tuckerton, NJ.
1991 R/V Bartlet, Barents Sea polar front internal wave experiment, Tromso, Norway.
1989 R/V Point Sur, Monterey Bay internal wave tomography experiment, Moss Landing, CA

PEER-REVIEWED PUBLICATIONS:

Johnson, H.D., C.T. Taggart, **A.E. Newhall**, Y.-T. Lin, and M.F. Baumgartner, 2022, "Acoustic detection of right whale upcalls identified in near-real time from a moored buoy and a Slocum glider", *J. Acoust. Soc. Am.*, **151**, DOI:10.1121/10.0010124.
Amaral, J.L., J.H. Miller, G.R. Potty, K.J. Vigness-Raposa, A.S. Frankel, Y.-T. Lin, **A.E. Newhall**, D.R. Wilkes and A.N. Garvilov, 2020," Characterization of impact pile driving signals during installation of offshore wind turbine foundations", *J. Acoust. Soc. Am.*, **147**, DOI: 10.1121/10.0001035.
Lin, Y.-T., **A.E. Newhall**, J.H. Miller, G.R. Potty and Kathleen J. Vigness-Raposa. 2019. "A three-dimensional underwater sound propagation model for offshore wind farm noise prediction", *J. Acoust. Soc. Am.*, **145**, EL335 (2019); DOI: 10.1121/1.5099560

- Lynch, J.F., G.G. Gawarkiewicz, Y.-T. Lin, T.F. Duda and **A.E. Newhall**. 2018. "Impacts of ocean warming on acoustics propagation over continental shelf and slope regions", *Oceanography* 32(2), <https://doi.org/10.5670/oceanog.2018.219>.
- Duda, T.F., Y.-T. Lin, M. Buijsman, and **A.E. Newhall** (2018)."Internal tidal modal ray refraction and energy ducting in baroclinic Gulf Stream currents," *J. Phys. Oceanogr.*, vol. 48, pp. 1969- 1993.
- Lynch, J.F. and **A.E. Newhall** (2017). "Shallow Water Acoustics", *Applied Underwater Acoustics*, eds T. Neighbors and D. Bradley, chap. 7, 403-469.
- Lynch, J.F., **A.E. Newhall**, R.A. Frosch (2016). "Underwater acoustics research at the Woods Hole Oceanographic Institution, 1930- 1960," *Proc. Mtgs. Acoust.*, 23, 070013. <http://dx.doi.org/10.1121/2.0000214>
- Grothues, T.M., **A.E. Newhall**, J.F. Lynch, G.G. Gawarkiewicz, K.S. Vogel (2016). "High Frequency Side Scan Sonar Fish Reconnaissance by Autonomous Underwater Vehicles", *Canadian Journal of Fisheries and Aquatic Sciences*, DOI: 10.1139/CJFAS-2015-0301.
- Newhall**, A.E., Y.-T. Lin, T.M. Grothues, James F. Lynch, Glen G. Gawarkiewicz (2016). "A method of observing acoustics scattering and absorption by fish schools using autonomous underwater vehicles.", *IEEE J. Ocean. Eng. Technical Communication*, 99, 1- 8. DOI: 10.1109/JOE.2016.2552878.
- Duda, T.F, **A.E. Newhall**, G.G. Gawarkiewicz, M.J. Caruso, H.C. Gruber, Y.J. Yang and S. Jan (2013). "Significant internal waves and internal tides measured northeast of Taiwan." *Journal of Marine Research*, 71(1), 47-82.
- Lin, Y.-T., T.F. Duda and **A.E. Newhall** (2013). "Three-dimensional sound propagation models using the parabolic-equation approximation and the slit-step fourier method." *J. Comp. Acoust.*, 21, 1250018 DOI: 10.1142/S0218396X1250018X.
- Newhall**, A.E., Y.-T. Lin, J.F. Lynch, M.F Baumgartner and G.G. Gawarkiewicz (2012). "Long distance passive localization of vocalizing sei whales using an acoustic normal mode approach." *J. Acoust. Soc. Am.*, 131(2), 1814-1825.
- Lin, Y.-T., **A.E. Newhall** and J.F. Lynch (2012). "Low-frequency broadband source localization using an adaptive normal mode back-propagation approach in a shallow-water environment." *J. Acoust. Soc. Am.*, 131(2), 1798-1813.
- Lynch, J.F., C. Emerson, P. Abbot, G.G. Gawarkiewicz, **A.E. Newhall**, Y.-T. Lin and T.F. Duda (2011). "On whether azimuthal isotropy and along shelf translational invariance found in low-frequency acoustic propagation along the New Jersey shelfbreak." *J. Acoust. Soc. Am.*, 131(2), 1762-1781.
- Duda, T.F., J.M. Collis, Y.-T. Lin, **A.E. Newhall**, J.F. Lynch and H.A. DeFerrari (2012). "Horizontal coherence of low-frequency fixed-path sound in a continental shelf region with internal-wave activity." *J. Acoust. Soc. Am.*, 131(2), 1782-1797.
- Colosi, J.A., T.F. Duda, Y.-T. Lin, J.F. Lynch, **A.E. Newhall** and B.D. Cornuelle (2012)."Observations of sound-speed fluctuations on the New Jersey continental shelf in the summer of 2006." *J. Acoust. Soc. Am.*, 131(2), 1733-1748.
- Lin, Y.-T., **A.E. Newhall**, T.F. Duda, P.F.J. Lermusiaux and P.J. Haley (2010). "Merging multiple-partial-depth data time series using objective emperical orthogonal function fitting." *IEEE J. Ocean. Eng.*, 35(4), 710-720.
- Song, A.J., M. Badiey, **A.E. Newhall**, J.F. Lynch, H.A. Deferrari and B. Katsnelson (2010). "Passive time reversal acoustic communications through shallow water internal waves." *IEEE J. Ocean. Eng.*, 35(40), 756-765.
- Lynch, J.F., Y.-T. Lin, T.F. Duda and **A.E. Newhall** (2010). "Acoustic ducting, shadowing, refraction and dispersion by curved non- linear internal waves in shallow water." *IEEE J. Ocean. Eng.*, 35(1), 12-27.
- Potty, G.R., J.H. Miller, P.S. Wilson, J.F. Lynch and **A.E. Newhall** (2008). "Geoacoustic inversion using combustive sound source signals." *J. Acoust. Soc. Am.*, 124, EL146-EL150.
- Tang, D.J., J.N. Moum, J.F. Lynch, P. Abbot, N.R. Chapman, P.H. Dahl, T.F. Duda, G.G. Gawarkiewicz, S. Glenn, J.A. Goff, H. Gruber, J.N. Kemp, A.R. Maffei, J.D. Nash and **A.E. Newhall** (2007). "Shallow Water '06 - A joint acoustics propagation/nonlinear internal wave physics experiment." *Oceanography*, 20(4), 156-167.
- Lynch, J.F., J.A. Colosi, G.G. Gawarkiewicz, T.F. Duda, A.D Pierce, M. Badiey, B.G. Katzenelson, J.H. Miller, W. Siegmann, C.-S. Chiu and **A.E. Newhall** (2006). "Consideration of fine-scale coastal oceanography and 3-D acoustics effects for the ESME sound exposure model." *IEEE J. Oceanic Eng.*, 31(1), 33-48.
- DeRuiter, S.D., P.L. Tyack, Y.-T. Lin, **A.E. Newhall**, J.F. Lynch and P.J.O. Miller (2006). "Modeling acoustic propagation of airgun array pulses recorded on tagged sperm whales (*Physeter macrocephalus*)."*J. Acoust. Soc. Am.*, 120(6), 4100-4114.
- Wei, R.C., C.F. Chen, **A.E. Newhall**, J.F. Lynch, T.F. Duda, C.S. Liu and P.C. Lin (2004). "A preliminary examination of the low- frequency ambient noise field in the South China Sea during the 2001 ASIAEX Experiment." *IEEE J. Ocean. Eng.*, 29(4), 1308- 1315.
- Lin, Y.-T., J.F. Lynch, N. Chitiros, C.F. Chen, **A.E. Newhall**, A. Turgut, S. Schock, C.-S. Chiu, L. Batek and C.-S. Liu (2004). "An estimate of the bottom compressional wave speed profile in the northeast South China Sea using 'sources of opportunity'." *IEEE J. Ocean. Eng.*, 29(4), 1231-1248.
- Duda, T.F., J.F. Lynch, **A.E. Newhall**, L. Wu and C.-S. Chiu (2004). "Fluctuations of 400 Hz sound intensity in the 2001 ASIAEX South China Sea Experiment." *IEEE J. Ocean. Eng.*, 29(4), 1264-1279.
- Sperry, B.J., J.F. Lynch, G.G. Gawarkiewicz, C.-S. Chiu and **A.E. Newhall** (2003). "Characteristics of acoustics propagation to the eastern vertical line array receiver during the summer 1996 New England Shelfbreak PRIMER experiment." *IEEE J. Ocean. Eng.*, 28(4), 729-749.

- Lynch, J.F., **A.E. Newhall**, B. Sperry, G.G. Gawarkiewicz, A. Fredricks, P.L. Tyack, C.-S. Chiu and P. Abbot (2003). "Spatial and Temporal Variations in Acoustic Propagation Characteristics at the New England Shelfbreak Front." *IEEE J. Ocean. Eng.*, 28(1), 129-150.
- Rouseff, D., A. Turget, S.N. Wolf, S. Finnette, M.H. Orr, B.H. Pasewark, J.R. Apel, M. Badiey, C.-S. Chiu, R.H. Headrick, J.F. Lynch, J.N. Kemp, **A.E. Newhall**, K.v.d. Heydt and D. Tielbuerger (2003). "Coherence of acoustic modes propagating through shallow water internal waves." *J. Acoust. Soc. Am.*, 111(4), 1655-1666.
- Irish, J.D., A. Haye, P.A. Traykovski, **A.E. Newhall** and P. Craig (2002). "On Attaching Acoustic Imaging Instrumentation to the LEO15 Observatory for Sediment Transport and Bottom Boundary Layer Studies." *IEEE J. Ocean. Eng.*, 27(2), 254-266.
- Lynch, J.F., A. Fredricks, J.A. Colosi, G.G. Gawarkiewicz, **A.E. Newhall**, C.-S. Chiu and M. Orr. (2002). "Acoustic effects of environmental variability in the SWARM, PRIMER and ASIAEX experiments." Impact of Littoral Environmental Variability on Acoustic Predictions and Sonar Performance, pp. 3-10. Springer Netherlands.
- Finnette, S., M.H. Orr, A. Turgut, J.R. Apel, M. Badiey, C.-S. Chiu, R. Headrick, J.N. Kemp, J.F. Lynch, **A.E. Newhall**, K.v.d. Heydt, B.H. Pasewark, S. Wolf and D. Tielbuerger (2000). "Acoustic field variability induced by time-evolving internal wave fields." *J. Acoust. Soc. Am.*, 108(3), 957-972.
- Headrick, R., J.F. Lynch and the SWARM group (2000). "Modeling mode arrivals in the 1995 SWARM experiment acoustic transmissions." *J. Acoust. Soc. Am.*, 107(1), 221-236.
- Headrick, R., J.F. Lynch and the SWARM group (2000). "Acoustic normal mode fluctuations statistics in the 1995 SWARM internal wave scattering experiment." *J. Acoust. Soc. Am.*, 107(1), 201-220.
- Irish, J.D., J.F. Lynch, P.A. Traykovski, **A.E. Newhall** and K. Prada (1999). "A self-contained sector scanning sonar for bottom roughness observations as part of suspended sediment studies." *J. Atmos. and Ocean. Technol.*, 16(11), 1830-1841.
- Gawarkiewicz, G.G., C.A. Linder, J.F. Lynch and A.E. Newhall (1999). "A surface-trapped Intrusion of slope water onto the continental shelf in the Middle Atlantic Bight." *Geophys. Res. Lett.*, 23(25), 3763-3766.
- Lynch, J.F., J.D. Irish, T.F. Gross, P.L. Wiberg, **A.E. Newhall**, P.A. Traykovski and J.D. Warren (1997). "Acoustic measurements of the spatial and temporal structure of the near-bottom boundary layer in the 1990-91 STRESS experiment." *Continental Shelf Research*, 17(10), 1271-1295.
- Apel, J., M. Badiey, C.-S. Chiu, S. Finnette, J.N. Kemp, J.F. Lynch, **A.E. Newhall**, M.H. Orr, B.H. Pasewark, D. Tielbuerger, A. Turgut, K.v.d. Heydt and S. Wolf (1996). "An overview of the 1995 SWARM shallow water internal acoustic scattering experiment." *IEEE J. Ocean Eng.*, 22(3), 465-500.
- Lynch, J.F., **A.E. Newhall**, C.-S. Chiu and J.H. Miller (1994). "Three dimensional ray acoustics in a realistic ocean." *OCEANOGRAPHY AND ACOUSTICS, Prediction and Propagation Models*, Allan Robinson, Ding Lee, editors, AIP Press, Chapter 9, 198-232.
- Lynch, J.F., **A.E. Newhall**, J.H. Miller, C.-S. Chiu, R.C. Dees, K.P. Schaaff and S. Paulsen (1990). "Surface wave, wave group, and internal wave observations in the 1988 Monterey Bay Tomography Experiment." *J. Acoust. Soc. Am.*, 87, 131.
- Newhall**, A.E., J.F. Lynch, C.-S. Chiu and J.R. Daugherty (1990). "Improvements in three dimensional raytracing codes for underwater acoustics." *Computational Acoustics – Ocean Acoustics and Supercomputing*, D.Lee, A.Cakmak, P.Vichnevetsky, editors, IMACS Proceedings, 1, 169-185.

CONFERENCE PROCEEDINGS:

- Lynch, J.F., **A.E. Newhall** and R.A. Frosch (2016), "Underwater acoustics research at the Woods Hole Oceanographic Institution 1930-1960", Proc. of Meetings on Acoustics, 23. 1-12. DOI: 10.1121/2.0000214.
- Lynch, J.F., Y.-T. Lin, T.F. Duda and **A.E. Newhall** (2013). "Characteristics of acoustic propagation and scattering in marine canyons." Eur. Conf. on Underwater Acoust. (ECUA), Corfu..
- Colin, M.E.G.D., T.F. Duda, L.A. te Raa, T. van Zon, P.J. Haley, P.F.J. Lermusiaux, W.G. Leslie, C. Mirabito, F.P.A. Lam, **A.E. Newhall**, Y.-T. Lin, and J.F. Lynch (2013). "Time-evolving acoustic propagation modeling in a complex ocean environment." *OCEANS 2013 MTS/IEEE*, Bergen.
- Lin, Y.-T., T.F. Duda, C. Emerson, G.G. Gawarkiewicz, **A.E. Newhall**, B. Calder, J.F. Lynch, T.J. Yang and S. Jan (2013). "Experimental and numerical studies of sound propagation over a submarine canyon northeast of Taiwan." *IEEE J. Ocean. Eng.*.
- Wang, J., X. Yang, L. Wu, H. Wang, J.F. Lynch and **A.E. Newhall** (2012). "Impact of internal waves on the coherent underwater acoustic communication." AIP Conf. Proc. 1495, 424-431.
- Prior, M.K., N.R. Chapman and **A.E. Newhall** (2010). "The long range detection of an accidental underwater explosion." In Proc. 10th Eur. Conf. Underwater Acoustics, pp. 835-841, Istanbul, Turkey.
- Duda, T.F., Y.-T. Lin, **A.E. Newhall**, W.G. Zhang and J.F. Lynch (2010). "Computational studies of time-varying three-dimensional acoustic propagation in canyon and slope regions." *IEEE Oceans*, 1-6, doi: 10.1109/OCEANS.2010.5664419.

- Lynch, J.F., T.F. Duda, Y.T. Lin and **A.E. Newhall** (2010). "Nonlinear Internal Wave Interactions with Low Frequency Shallow Water Sound What is left to Do?" AIP Conference Proceedings, 1272, 23.
- Maffei, A.R., S. Lerner, J.F. Lynch, **A.E. Newhall**, K. Fall, C. Sellers, S. Glenn (2007). "Exview: a real-time collaboration environment for multi-ship experiments." *IEEE Oceans*, doi: 10.1109/OCEANSE.2007.4302345.
- Irish, J.D., J.F. Lynch, J.N. Kemp, T.F. Duda and **A.E. Newhall** (2007). "A moored array for measuring internal solitary waves during Shallow Water 06." *IEEE Oceans*, 1-6, doi:10.1109/OCEANS.2007.4449170.
- Holmes, J.D., W.M. Carey, J.F. Lynch, J.N. Kemp, **A.E. Newhall** and A. Kukulya (2005). "An Autonomous underwater vehicle towed array for ocean acoustics measurements and inversions." *IEEE Oceans*, 1058-1061, doi: 10.1109/OCEANS.2005.1513204.
- Lin, Y.-T. C.F. Chen, J.F. Lynch, N. Chotiros, **A.E. Newhall**, A.D. Turgut, S. Schock and C.-S. Chiu (2004). "Acoustic inversions from an explosive source of opportunity in the ASIA EX2001-SCS experiment." UT'04. 2004 International Symposium on Underwater Technology, IEEE, 261-265.
- Wei, R.C., J.F. Lynch, **A.E. Newhall**, H.-C. Chan, C.-S. Liu and P.-C. Lin (2004). "The ambient noise fluctuation and directionality study in South China Sea." UT'04. 2004 International Symposium on Underwater Technology, IEEE, 255-260.

TECHNICAL REPORTS / UNPUBLISHED REPORTS:

- Johnson, H.D., **A.E. Newhall**, Y.-T. Lin, and M.F. Baumgartner, 2020, "Acoustic and oceanographic observations collected during the Nomans Island experiment in Spring 2017", Woods Hole Oceanog. Inst. Tech. Rept., WHOI-2020-04.
- Wisniewska, D.M.,L.A. Kyhn, J. Tougaard, M. Simon, Y.-T. Lin, **A.E. Newhall**, K. Beenholm, J.F. Lynch and P.T. Madsen (2014). "Propagation of airgun pulses in Baffin Bay 2012.", Danish Centre for Environment and Energy No. 109.
- Lynch, J.F., G.G. Gawarkiewicz, Y.-T. Lin, **A.E. Newhall** (2012). "Quantifying Acoustic Uncertainty Due to Marine Mammals and Fish Near the Shelfbreak Front Off Cape Hatteras." Woods Hole Oceanog. Inst. Annual Report, A859475.
- Newhall**, A.E., J.F. Lynch, G.G. Gawarkiewicz, T.F. Duda, N.M. McPhee, F.B. Bahr, C.D. Marquette, Y.-T. Lin, S. Jan, J. Wang, C.F. Chen, L.Y.S. Chiu, Y.J. Yang, R.C. Wei, C. Emerson, D. Morton, T. Abbot, P. Abbot, B. Calder, L. Mayer and P.F.J. Lermusiaux (2010). "Acoustics and oceanographic observations collected during the QPE experiment by Research Vessels OR1, OR2, and OR3 in the East China Sea in the Summer of 2009." Woods Hole Oceanog. Inst. Tech. Rept., WHOI-2010-06.
- Newhall**, A.E., Y.-T. Lin and J.F Lynch, "WHOI PE acoustics propagation modeling in support of the ONR Pilot QPE Experiment." August, 2008.
- Newhall**, A.E., T.F. Duda, K.v.d. Heydt, J.D. Irish, J.N. Kemp, S.A. Lerner, S.P. Liberatore, Y.-T. Lin, J.F. Lynch, A.R. Maffei, A.K. Morozov, A. Shmelev, C.J. Sellers and W.E. Witzell Jr (2007). "Acoustic and oceanographic observations and configuration for the WHOI moorings from the SW06 experiment." Woods Hole Oceanog. Inst. Tech. Rept., WHOI-2007-04.
- Lynch J.F., A. Fredricks, J.A. Colosi, G.G. Gawarkiewicz, B. Sperry, **A.E. Newhall** and C.-S.Chiu (2002) "An overview of acoustic fluctuation results from the summer 1996 New England Shelfbreak PRIMER Experiment." Conference of Undersea Technology 2002 Proceedings, Japan.
- Newhall**, A.E., L. Costello, T.F. Duda, J. Dunn, G.G. Gawarkiewicz, J.D. Irish, W. Ostrom, T. Schroeder, R. Trask and K.v.d. Heydt (2001). "Preliminary acoustic and oceanographic observations from the ASIAEX 2001 South China Sea Experiment." Woods Hole Oceanog. Tech. Rept., WHOI-2001-12.
- Irish, J.D., M. Carroll, R. Singer, **A.E. Newhall**, W. Paul, C. Johnson, C., W.E. Witzell, G.Rice and D. Fredericksson (2001). "Instrumentation for Open Ocean Aquaculture Monitoring." Woods Hole Oceanog. Tech. Rept., WHOI-2001-15.
- Newhall**, A.E., K.v.d. Heydt, B. Sperry, G.G. Gawarkiewicz and J.F. Lynch (2001). "Preliminary Acoustic and Oceanographic Observations from the Winter Primer Experiment." Woods Hole Oceanog. Tech. Rept., WHOI-98-19.
- Lynch, J.F. and the SWARM group (1997). "The New Jersey shallow water acoustic random medium propagation experiment: SWARM." Shallow Water Acoustics, R. Zhang and J. Zhou, editors, China Ocean Press, 213-218.
- Bucca, P.J., J.K. Fulford, J.F. Lynch and **A.E. Newhall** (1997). "Environmental variability during the third acoustic characterization test (ACT III) in the Strait of Korea." Naval Research Lab Tech. Rept., NRL/FR/7182-97-9667.
- Irish, J.D., J.F. Lynch, **A.E. Newhall**, W.E. Witzell, P.A. Traykovski and S. Glenn (1995). "Winter observations of oceanography and sediment transport at LEO-15." Woods Hole Oceanog. Tech. Rept., WHOI-95-17.
- Lynch, J.F. and **A.E. Newhall** "Hydroacoustic nuclear test monitoring coverage and propagation issues", Report for the Center for Siesmic Studies, August, 1994.
- Newhall**, A.E. "Preliminary Barents Sea experiment array water depth and mooring tilt report." WHOI Tomography Group report, December, 1992.
- Newhall**, A.E. "Barents Sea acoustic mooring survey and mooring motion using acoustic transponders." WHOI Tomography Group report, November, 1992.

- Lynch, J.F., D.E. Frye, K.R. Peal, S.P. Liberatore, S.M. Kery, E. Hobart, **A.E. Newhall** and S. Smith. (1992). "Real-Time Tomography Mooring." Woods Hole Oceanog. Tech. Rept., WHOI-92-29.
- Newhall, A.E.** "Unix Corner - Helpful hints from the Unix User Group", biweekly posting to the local WHOI newsgroup about Unix, 1991-1995.
- Newhall, A.E.** "Usenet Net news Installation and Documentation", for WHOI IPCL user services, 1991.
- Newhall, A.E.** "Usenet: A Distributed News Service", The WHOI IPCL Newsletter, Number 130, February, 1991.
- Lynch, J.F., **A.E. Newhall**, C.-S. Chiu and J.R. Daugherty, "HARPO-MOD1 3-D/2-D Sound Speed and Current Profile Interpolator." July, 1989.

INVITED TALKS/OUTREACH

- "Underwater sound and oceanography", A.E. Newhall, Children's School of Science, Oceanography class, Woods Hole, July 2021.
- "Underwater acoustic modeling and propagation", ONR Scientist to Sea Program, Groton, CN, 2019, 2020.
- "Underwater sound and oceanography", A.E. Newhall, Children's School of Science, Oceanography classes I and II, Woods Hole, August 2018.
- "Sei whale localization and tracking using a moored horizontal and vertical line array near the continental shelf", A.E. Newhall, Bill Watkins Memorial Marine Mammal Symposium, New Bedford Whaling Museum, March 2015.
- "Whales, Fish and Acoustics." A.E. Newhall, AOPE Dept. seminar, Mar 5, 2013.
- "Passive acoustics localization of Baleen whales with advanced array processing." Y.-T.Lin, A.E. Newhall, M.F. Baumgartner, Underwater Acoustic Signal Processing Workshop, University of Rhode Island, RI, Oct 12-14, 2011.
- "An examination of an advanced whale monitoring technique using passive acoustics in Cape Cod bay." Poster for WHOI Trustees presentation, Oct, 2011.
- "Numerical considerations for three-dimensional sound propagation modeling: coordinate systems and grid sizes." Y.-T. Lin, A.E. Newhall, T.F. Duda, C.-F. Chen, ICTCA, Taipei, Taiwan, April 2011.
- "Music of Sound." Oceanus Magazine video interview, Feb. 2011. (<http://www.whoi.edu/oceanus/viewArticle.do?id=89968>)
- "Rhythms from the Ocean." TEDx Woods Hole, participant, 1st Woods Hole TEDx conference, Oct. 2010.
- "Ocean environmental effects on low-frequency sound propagation in shallow water with application to marine mammals." A.E. Newhall and Y.-T. Lin, 160th Meeting of the Acoustical Society of America - 2nd Pan-American/Iberian Meeting on Acoustics, Invited Paper, November, 2010.
- "Sound Propagation modeling of right whale calls in Cape Cod Bay." Y.-T. Lin and A.E. Newhall, 160th Meeting of the Acoustical Society of America - 2nd Pan-American/Iberian Meeting on Acoustics, November, 2010.
- "A normal mode back-propagation approach for broadband sound source localization and an application to passive sei whale localization." National Taiwan University seminar, Taipei, Taiwan, September, 2009.
- "A normal mode back-propagation approach for broadband sound source localization and an application to passive sei whale localization." WHOI AOPE Department seminar, June, 2009."Ocean Acoustics and current research at the WHOI Ocean Acoustics Lab." WHOI Summer Student Lecture Series, August 7, 2007.
- "Sounding the Depths - Research in Ocean Acoustics." Keynote Speaker, 31st Annual Massachusetts Marine Educators Conference, Woods Hole, MA, May 5, 2007.
- "Preliminary modeling of acoustic arrivals on tagged (DTAG) Sperm Whales in the Gulf of Mexico." WHOI Summer Student Lecture Series, August 3, 2006.
- "Sounds from the South China Sea during the 2001 ASIAEx experiment." WHOI Summer Student Lecture Series, August 6, 2005.