

Publications in international peer reviewed journals

Web of science: 1381 citations, h-index: 23

51. Muchowski, J., **Arneborg, L.**, Umlauf, L., Holtermann, P. L., Eisbrenner, E., Humborg, C., ... & Stranne, C. (2023). Diapycnal Mixing Induced by Rough Small-Scale Bathymetry. *Geophysical Research Letters*, 50. DOI: 10.1029/2023GL103514
50. Muchowski, J., Umlauf, L., **Arneborg, L.**, Holtermann, P., Weidner, E., Humborg, C., & Stranne, C. (2022). Potential and Limitations of a Commercial Broadband Echo Sounder for Remote Observations of Turbulent Mixing. *Journal of Atmospheric and Oceanic Technology*, 39(12), 1985-2003.
49. Klemm, K., Cembella, A., Clarke, D., Cusack, C., **Arneborg, L.**, Karlson, B., ... & John, U. (2022). Apparent biogeographical trends in Alexandrium blooms for northern Europe: Å identifying links to climate change and effective adaptive actions. *Harmful Algae*, 119, 102335.
48. Karlson, B., **Arneborg, L.**, Johansson, J., Linders, J., Liu, Y., & Olofsson, M. (2022). A suggested climate service for cyanobacteria blooms in the Baltic Sea—Comparing three monitoring methods. *Harmful Algae*, 118, 102291.
47. Wåhlström, I., Hammar, L., Hume, D., Pålsson, J., Almroth-Rosell, E., Dieterich, C., **Arneborg, L.**,... & Jonsson, P. R. (2022). Projected climate change impact on a coastal sea—As significant as all current pressures combined. *Global change biology*, 28(17), 5310-5319.
46. Almroth-Rosell, E., Wåhlstrom, I., Hansson, M., Vali, G., Eilola, K., Andersson, P., ... & **Arneborg, L.** (2021). A Regime Shift Toward a More Anoxic Environment in a Eutrophic Sea in Northern Europe. *Frontiers in Marine Science*, 8.
45. Nylund, A. T., **Arneborg, L.**, Tengberg, A., Mallast, U., & Hassellöv, I. M. (2021). In situ observations of turbulent ship wakes and their spatiotemporal extent. *Ocean Science*, 17(5), 1285-1302.
44. Karlson, B., Andersen, P., **Arneborg, L.**, Cembella, A., Eikrem, W., John, U., ... & Suikkanen, S. (2021). Harmful algal blooms and their effects in coastal seas of Northern Europe. *Harmful Algae*, 101989.
43. MacIntyre, S., Bastviken, D., **Arneborg, L.**, Crowe, A. T., Karlsson, J., Andersson, A., ... & Melack, J. M. (2021). Turbulence in a small boreal lake: Consequences for air–water gas exchange. *Limnology and oceanography*, 66(3), 827-854.
42. Blenckner, T., Ammar, Y., Müller-Karulis, B., Niiranen, S., **Arneborg, L.**, & Li, Q. (2021). The risk for novel and disappearing environmental conditions in the Baltic Sea. *Frontiers in Marine Science*, 8.
41. Selander, E., Fredriksson, S. T., & **Arneborg, L.** (2020). Chemical Signaling in the Turbulent Ocean—Hide and Seek at the Kolmogorov Scale. *Fluids*, 5(2), 54.
40. Gröger, M., **Arneborg, L.**, Dieterich, C., Höglund, A., & Meier, H. E. M. (2019). Summer hydrographic changes in the Baltic Sea, Kattegat and Skagerrak projected in an ensemble of climate scenarios downscaled with a coupled regional ocean–sea ice–atmosphere model. *Climate Dynamics*, 53(9-10), 5945-5966.
39. Dieterich, C., Groger, M., **Arneborg, L.**, & Andersson, H. (2019). Extreme sea levels in the Baltic Sea under climate change scenarios-Part 1: Model validation and sensitivity. *Ocean Science*, 15(6), 1399-1418.
38. Amir-Heidari, P., **Arneborg, L.**, Lindgren, J. F., Lindhe, A., Rosén, L., Raie, M., Axell, L., & Hassellöv, I. M. (2019). A state-of-the-art model for spatial and stochastic oil spill risk assessment: A case study of oil spill from a shipwreck. *Environment International*, 126, 309-320.
37. Olofsson, M., Robertson, E. K., Edler, L., **Arneborg, L.**, Whitehouse, M. J., & Ploug, H. (2019).

- Nitrate and ammonium fluxes to diatoms and dinoflagellates at a single cell level in mixed field communities in the sea. *Scientific reports*, 9(1), 1424.
36. Lu, L., Goerlandt, F., Banda, O. A. V., Kujala, P., Höglund, A., & **Arneborg, L.** (2019). A Bayesian Network risk model for assessing oil spill recovery effectiveness in the ice-covered Northern Baltic Sea. *Marine pollution bulletin*, 139, 440-458.
 35. Edman, M. K., Eilola, K., Almroth-Rosell, E., Meier, H. E., Wählström, I., & **Arneborg, L.** (2018). Nutrient retention in the Swedish coastal zone. *Frontiers in Marine Science*, 5, 415.
 34. MacIntyre, S., Crowe, A. T., Cortés, A., & **Arneborg, L.** (2018). Turbulence in a small arctic pond. *Limnology and Oceanography*, 63(6), 2337-2358.
 33. Karlsson, T. M., **Arneborg, L.**, Broström, G., Almroth, B. C., Gipperth, L., & Hassellöv, M. (2018). The unaccountability case of plastic pellet pollution. *Marine pollution bulletin*, 129(1), 52-60.
 32. **Arneborg, L.**, Höglund, A., Axell, L., Lensu, M., Liungman, O., & Mattsson, J., 2017: Oil drift modeling in pack ice—Sensitivity to oil-in-ice parameters. *Ocean Engineering*, 144, 340-350.
 31. Hieronymus, M., J. Hieronymus, and **L. Arneborg**, 2017: Sea Level modelling in the Baltic and the North Sea: The respective role of different parts of the forcing. *Ocean Modeling*, 118, 59-72.
 30. Björk, G., K. Nordberg, **L. Arneborg**, L. Bornmalm, R. Harland, A. Robijn, and M. Ödalen, 2017: Seasonal oxygen depletion in a shallow sill fjord on the Swedish west coast. *J. Mar. Sys.*, 175, 1-14.
 29. **Arneborg, L.**, P. Jansson, A. Staalstrom, and G. Broström, 2017: Tidal energy loss, internal tide radiation, and local dissipation for two-layer tidal flow over a sill. *J. Phys. Oceanogr.*, 47, 1521-1538.
 28. Fredriksson, S.T., Handler, R.A., Nilsson, H., and **Arneborg, L.**, 2016 Surface shear stress dependence of gas transfer velocity parameterizations using DNS. *J. Geophys. Res., Oceans*, 121(10), 7369-7389.
 27. **Arneborg, L.**, 2016: Comment on “Influence of sea level rise on the dynamics of salt inflows in the Baltic Sea” by R. Hordoir, L. Axell, U. Löptien, H. Dietze, and I. Kuznetsov, *J. Geophys. Res. Oceans*, 121, doi:10.1002/2015JC011451.
 26. Fredriksson, S. T., **L. Arneborg**, H. Nilsson, Q. Zhang, and R. A. Handler, 2016: An evaluation of gas transfer velocity parameterizations during natural convection using DNS, *J. Geophys. Res. Oceans*, 121, doi:10.1002/2015JC011112.
 25. Staalström, A., **L. Arneborg**, B. Liljebladh, and G. Broström, 2015. Observations of turbulence caused by a combination of tides and mean baroclinic flow over a fjord sill. *J. Phys. Oceanogr.* 45, 355-367.
 24. Ha, H.K, A.K. Wählin, T.W. Kim, S.H. Lee, J.H. Lee, H.J. Lee, C.S. Hong, **L. Arneborg**, G. Björk and O. Kalén, 2014. Circulation and modification of warm deep water on the central Amundsen Shelf. *J. Phys. Oceanogr.*, 44, 1493-1501.
 23. Wählin, A.K, O. Kalén, **L. Arneborg**, G. Björk, G. K. Carvajal, H. K. Ha, T. W. Kim, S. H. Lee, J. H. Lee, C. Stranne, 2013. Variability of warm deep water inflow in a submarine trough on the Amundsen Shelf. *J. Phys. Oceanogr.*, 43, 2054-2070.
 22. Gålfalk, M., D. Bastviken, S. Fredriksson, and **L. Arneborg**, 2013: Determination of the piston velocity for water-air interfaces using flux chambers, acoustic Doppler velocimetry, and IR imaging of the water surface. *J. Geophys. Res., Biogeosc.* 118, 770-782.
 21. **Arneborg, L.**, A.K. Wählin, G. Björk, B. Liljebladh and A. Orsi, 2012: Persistent inflow of warm water onto the central Amundsen shelf. *Nature Geosci.*, 5, 876-880.
 20. Wählin, A.K., R.D. Muench, **L. Arneborg**, G. Björk, H.K. HA, S.H. Lee, and H. Alsén, 2012: Some implications of Ekman layer dynamics for cross-shelf exchange in the Amundsen sea. *J.*

- Phys. Oceanogr.*, 42, 1461-1474.
19. Umlauf, L., **L. Arneborg**, R. Hofmeister, and H. Burchard, 2010: Entrainment in shallow rotating gravity currents: A modeling study. *J. Phys. Oceanogr.*, 40, 1819-1834.
 18. Umlauf, L., and **L. Arneborg**, 2009a: Dynamics of rotating shallow gravity currents passing through a channel. Part I: Observations of transverse structure. *J. Phys. Oceanogr.*, 39, 2385-2401.
 17. Umlauf, L., and **L. Arneborg**, 2009b: Dynamics of rotating shallow gravity currents passing through a channel. Part II: Analysis. *J. Phys. Oceanogr.*, 39, 2402-2416.
 16. **Arneborg, L.**, and B. Liljebladh, 2009: Overturning and dissipation caused by baroclinic tidal flow near the sill of a fjord basin. *J. Phys. Oceanogr.*, 39, 2156-2174.
 15. **Arneborg, L.**, V. Fiekas, L. Umlauf, and H. Burchard, 2007: Gravity current dynamics and entrainment - a process study based on observations in the Arkona Basin. *J. Phys. Oceanogr.*, 37, 2094-2113.
 14. Umlauf, L., **L. Arneborg**, H. Burchard, V. Fiekas, H.U. Lass, V. Mohrholz, and H. Prandke, 2007: Transverse structure of turbulence in a rotating gravity current. *Geophys. Res. Lett.*, 34, L08601, doi:10.1029/2007GL029521.
 13. Sellschopp, J., **L. Arneborg**, M. Knoll, V. Fiekas, F. Gerdes, Hans Burchard, H. U. Lass, V. Mohrholz, L. Umlauf, 2006: Direct observations of a medium-intensity inflow into the Baltic Sea, *Cont. Shelf Res.*, 26, 2393-2414.
 12. Meier, H.E.M., R. Feistel, J. Piechura, **L. Arneborg**, H. Burchard, V. Fiekas, N. Golenko, N. Kuzmina, V. Mohrholz, C. Nohr, V.T. Paka, J. Sellschopp, A. Stips, V. Zhurbas, 2006: Ventilation of the Baltic Sea deep water: A brief review of present knowledge from observations and models. *Oceanologia*, 48, 133-164.
 11. Erlandsson, C., A. Stigebrandt, and **L. Arneborg**, 2006: The sensitivity of minimum oxygen concentrations in a fjord to changes in biotic and abiotic external forcing. *Limnol. Oceanogr.* 51, 631-638.
 10. Burchard H., H.U. Lass, V. Morholz, L. Umlauf, J. Sellschopp, V. Fiekas, K. Bolding, **L. Arneborg**, 2005. Dynamics of medium-intensity dense water plumes in the Arkona Basin, Western Baltic Sea. *Ocean Dynamics*. 55, 391-402.
 9. **Arneborg, L.**, 2004: Turnover times for the water above sill level in Gullmar Fjord. *Continental Shelf Research*, 24, 443-460.
 8. **Arneborg, L.**, C.P. Erlandsson, B. Liljebladh, A. Stigebrandt, 2004a: The rate of inflow and mixing during deepwater renewal in a sill fjord. *Limnol. Oceanogr.*, 49, 768-777.
 7. **Arneborg, L.**, C. Janzen, B. Liljebladh, T.P. Rippeth, J.H. Simpson, and A. Stigebrandt, 2004b: Spatial variability of diapycnal mixing and turbulent dissipation rates in a stagnant fjord basin. *J. Phys. Oceanogr.*, 34, 1679-1691.
 6. **Arneborg, L.**, 2002: Mixing efficiencies in patchy turbulence. *J. Phys. Oceanogr.* 32, 1496-1506.
 5. **Arneborg, L.**, and B. Liljebladh, 2001a: The internal seiches in Gullmar Fjord. Part I: Dynamics. *J. Phys. Oceanogr.* 31, 2549-2566.
 4. **Arneborg, L.**, and B. Liljebladh, 2001b: The internal seiches in Gullmar Fjord. Part II: Contribution to basin water mixing. *J. Phys. Oceanogr.* 31, 2567-2574.
 3. **Arneborg, L.** and E.A. Hansen, 1998: Numerical modelling of the advection-dispersion equation in a stretched curvilinear grid using the QUICKEST scheme. *Int. J. Numer. Mech. Fluids*, 28, 1033 - 1052.
 2. Hansen, E.A., and **L. Arneborg**, 1997: The use of a discrete vortex model for shallow water flow around islands and coastal structures. *Coastal Engng.*, 32, 223 - 246.

1. Jonsson, I.G., and **L. Arneborg**, 1995: Energy properties and shoaling of higher-order Stokes waves on a current. *Ocean Engng.*, 22, 819 – 857.

Other publications

- Brévière E, Hammar L, Wählström I, Pålsson J, **Arneborg L**, Almroth-Rosell E and Jonsson P (2023) Why We Must Think About Climate Change When Planning How to Use Our Seas. *Front. Young Minds*. 11:1029011. doi: 10.3389/frym.2023.1029011
- Wängberg, S.-Å., G. Broström, **L. Arneborg**, M. Johnson, 2018: Vänern och dess fantastiska hydrografi. *Skaraborgsnatur 2017*.
- Fredriksson, S.T., **Arneborg, L.**, Nilsson H., and Handler, R.A., 2016: Near-surface physics during convection affecting air-water gas transfer. *IOP Conf. Series: Earth and Env. Sci.*, 35, 012007. Doi: 10.1088/1755-1315/35/1/012007.
- Arneborg, L.** and B. Liljebladh, 2015: Strömklimat vid två potentiella testbäddar för strömenergi vid Orust. Dept. of Earth Sciences, Gothenburg Univ. Ser. C, no 119, ISSN 1400-3823X, 15 pp.
- Nordberg, K., Bornmalm, L., Cato, I., **Arneborg, L.**, Björk, G. and Robijn, A., 2012: Sannäsfjorden - en studie av hydrografisk, botten-dynamisk och miljökemisk status. Dept. of Earth Sciences, Gothenburg Univ. Ser C, no 95, ISSN 1400-383X. 50 pp.
- Arneborg, L.**, 2004: Osynliga Vågor i Gullmarsfjorden. Havsmiljön.
- "Swedish expert" in the "Vetenskapens Värld" (SVT2) version of BBC Horizon's "Freak Waves", 2003.