

Zoé Koenig

Nansenvegen 21
Tromsø
Norvège

zoe.koenig@uib.no
+ 33 6 24 72 07 21
Birth date : 27 May 1991 (30)

Research Interests and summary of key skills

I am an experimentalist physical oceanographer. I am passionate by polar sciences, circulation and ocean dynamics.

- Communication skills
- Experience with many oceanic instruments and data cal/val
- Experience in executing, planning and leading field works
- Sea-going and ice camp experiences
- Languages. French (native), English (fluent)
- Good publication record
- Extensive knowledge of ocean-ice dynamics
- Interdisciplinary skills
- Model output analyses
- Fluent numerical programming with Matlab
- Experience with various in situ data sets

Education

- 2017 PhD in physical oceanography, LOCEAN, UPMC, Paris, France
- 2014 Diploma from Ecole Normale Supérieure (Paris, France) in Geosciences.
- 2013 Master OACOS (Ocean, Atmosphere, Climate, Satellite observations). With high honors. UPMC, Ecole Normale Supérieure, Paris, France.
- 2011 Bachelor in physics, UPMC and Ecole Normale Supérieure in Paris, France
- 2010-2014 Student at École Normale Supérieure in Paris (admission ranking : 4), France.
- 2008-2010 2-year intensive studies 'Classe Préparatoire' in BCPST (Biology, Chemistry, Physics, Geosciences), Henri IV, Paris, France
- 2008 Scientific baccalauréat with Maths options. With high honors.

Research experiences

- 12/2022 - Present **Postdoc at the University of Tromsø, Tromsø, Norway**
BREATHE project (<https://www.breathearctic.com/>)
Nutrient and oxygen turbulent fluxes at the ice-ocean interface.
- 09.2018 - Now **Postdoc at University of Bergen, Geophysical Institute (2018-2020) and at the Norwegian Polar Institute, Tromsø, Norvège (2020-Now)**
Nansen Legacy project (<https://arvenetternansen.com/>)
Turbulence and mixing north of Svalbard and in the Barents Sea, from mooring, glider, AUV and hydrographic campaign data.
- 11/2017.08/2018 **Postdoc at LOCEAN UPMC, Paris, France.**
Founded by Pan-Arctic Options – Belmont forum (<http://panarcticoptions.org>).
Small-scale dynamics north of Svalbard from glider observations.
- 09/2014.10/2017 **PhD at LOCEAN**
Properties and circulation of Atlantic Waters north of Svalbard in a changing Arctic. The PhD was based on observations from the IAOOS platforms deployed during the N-ICE2015 expeditions and from moorings from the Damocles project. The observations were combined with the analysis of high resolution model outputs.

Supervision: Christine Provost (LOCEAN), Gilles Garric (Mercator-Ocean).

- 03/2013.08/2014 **Master thesis at LOCEAN, UPMC, FRANCE**
Computation and analysis of a 20-year long volume transport time series of the Antarctic Circumpolar Current in Drake Passage from 3-year-long mooring data and 20-year-long altimetry data.
Supervision: Christine Provost (LOCEAN)
- 03/2012.07/2012 **Internship at Scripps Institution of Oceanography, San Diego, USA**
Seasonal to decadal variability of the surface ocean layer in Drake Passage from repeated transects of ship ADCP
Supervision: Teresa Chereskin
- 06/2011 **Stage de Licence 3 LOCEAN, UPMC, Paris, FRANCE**
Current estimates in the Ummannaq Bay, Greenland from satellite images (MODIS)
Supervision: Christine Provost

Teaching and supervision

- 2021 **Ava Asgari, Master thesis (UPMC, LOCEAN, Paris, France)**
Atlantic Water inflow through the Yermak Pass Branch : evolution since 2007.
- 2019 **Aleksander Libæk, Master thesis (Université de Bergen, Norvège).**
Tidal forcing, internal tide energy and vertical mixing north of Svalbard.
- 2019.2022 **Eivind Kolås, PhD student (Université de Bergen, Norvège).**
Co-supervision with Ilker Fer (UiB) and Martin Ludvigsen (NTNU)
Hydrography, currents and ocean physical processes north of Svalbard and in the Barents Sea.
- 2018 **Cecilia Bertosio, Master thesis (UPMC, LOCEAN, Paris, France).**
Ocean circulation and hydrography in the Canadian Basin from IAOOS platform data and Mercator-Ocean model.
- 2017 **Marylou Athanase, Master thesis (UPMC, LOCEAN, Paris, France).**
Atlantic water in the central Arctic from IAOOS platform data.
- 2012.2014 Examinations in Physics and Chemistry in 'Classe préparatoire' at Henri IV (Paris)

Grants and awards

- 2019 Runner-up at the PhD award of the CNFGG, Paris, France
- 2018 PhD award from the chancellery of Paris, France
- 2017 Grant L'Oreal-Unesco, For Women in Science
- 2014.2017 PhD grant from Ecole Normale Supérieure, Paris, France

Field work expertise: 370 d

- 10 /2022 **Cruise in the Barents Sea. RV Kristine Bonnevie 15 j.**
Turbulence measurements.
- 07.08/2022 **Cruise in Nansen and Amundsen Basin RV Kronprins Haakon 35j**
3 ice stations of 2 days each. Turbulence measurements
- 02/2022 **Cruise north of Svalbard RV Kronprins Haakon 20d**
Turbulence measurements.
- 08/2021.09/2021 **Cruise in the Nansen and Amundsen Basin. RV Kronprins Haakon 30d**
In charge of the physical oceanography program.
- 02.2021 **Cruise in the Barents Sea. RV Kronprins Haakon 20d**
Turbulence measurements
- 08/2020.10/2020 **MOSAic leg 5 (<https://mosaic-expedition.org/>) RV Polarstern 90 d.**

	In charge of the physical oceanography program
05/2019	Instrument test cruise (Alesund, Norvège) RV Kristine Bonnevie 5d
09/2018	Cruise north of Svalbard RV Kronprins Haakon 15d Mooring deployment and turbulence measurements.
06/2018	Cruise north of Svalbard. RV Kristine Bonnevie 15d Process study from current and turbulence data
04/2018	Ice camp at the North Pole (Barneo). 10d. Chief scientist for the deployment of 2 IAOOS platforms equipped with biogeochemistry sensors, a snow buoy and an IMB for the AWI.
07/2017	Cruise north of Svalbard. RV Lance. 15d. Responsible for the deployment and recovery of a SeaExplorer glider.
04/2017	Ice camp at the North Pole (Barneo) 10d. Chief scientist for the deployment of 2 IAOOS platforms equipped with biogeochemistry sensors.
08/2015	Cruise in the Bering Strait and the Chukchi Sea Campagne. RV Araon 20d. Responsible for the deployment of 2 IAOOS platforms.
04/2014	Leg 3 of N-ICE2015 expedition north of Svalbard. RV Lance 25d. IAOOS platforms, CTD, LADCP, MSS, ADCP
10-11/2014	Opportunistic cruise onboard the sailboat Australis (On the shoulder of Shackleton). 40d Expedition between Drake Passage and South Sandwich Islands. Deployment of surface drifters and Argo profilers. Outreach project with APECS-France (zoe-en-expedition.blogspot.fr).
06/2013	Cruise in the mediterranean Sea (MOOSE project), RV Thetys 5d. CTD et water sampling.

International conferences and workshops
--

2022	MOSAIC Workshop, Potsdam, Germany ASOF meeting, Reykjavik, Island EGU meeting, online
2021	Nansen Legacy Annual meeting, Bergen, Norway Nansen Legacy Annual meeting, Trondheim, Norway Arctic Frontiers, online EGU, online
2020	Nansen Legacy Annual meeting, online Ocean Science meeting, San Diego, USA EGU, online
2019	Nansen Legacy Annual meeting, Oslo, Norway ASOF Meeting, Copenhagen, Denmark Workshop at UNIS, Longyearbyen, Svalbard, Norway
2018	Nansen Legacy Annual meeting, Bergen, Norway Polar18 meeting, Davos, Switzerland ASOF Meeting, Paris, France Ocean Science Meeting, Portland, USA 3-week research stay at NPI, Tromsø, Norway
2017	Ice-Arc General Assembly, Barcelona, Spain ASOF Meeting, Sopot, Poland 1-week research stay at Mercator Ocean, Ramonville Saint Agne, France
2016	FAMOS meeting, Woods Hole, USA N-ICE2015 Meeting, Tromsø, Norway Ice-Arc FP7 european project General Assembly, Tromsø, Norway

- 1-week research stay at Mercator Ocean, Ramonville Saint Agne, France
 Ocean Science Meeting, New-Orleans, USA
 2015 N-ICE2015 Meeting, Tromsø, Norway
 Ice-Arc FP7 european project General Assembly, Bologna, Italy
 2014 EGU, Vienna, Austria

Outreach

- 2021 Interview for radio show and podcasts on the MOSAiC expedition.
 Nansen Legacy blog during the 2 cruises in 2021.
 2020 Blog on sciencenorway.no during the MOSAiC expedition.
 Interview for TV show and podcasts.
 2018 Participation in the american documentary ‘True North’, Verizon TYT, dirigé par
 Michelle A. Boley.
 2017 With the grant L’Oreal Unesco ‘For Women in Science’, I have been interviewed
 by several french radios and magazines to share my experience as an early-career
 female researcher
 2015-2016 Organisation of the science fare for the LOCEAN, Paris
 2014 Outreach project around the expedition ‘On the shoulder of Shackleton’ in
 collaboration with APECS France. Webinars, blog (zoe-en-expedition.blogspot.fr).
 2014 Participation to the documentary: ‘On the shoulder of Shackleton’

Summer schools

- 10.2018 PODS X (Physical Oceanography Dissertation Symposium), Hawaii, USA.
 11.2016 4th FAMOS school: ‘Forum for Arctic Modeling and Observational Synthesis’,
 WHOI, Woods Hole, U.S.A
 09.2013 ACCESS european project summer school: Arctic Climate Change, Economy and
 Society

Reviewer activity (7)

Journal of Geophysical Research (5), Nature Geoscience (1), Journal of Physical Oceanography (1)

Languages and informatics

French (mother tongue), English (fluent) and Norwegian (basics)
 Informatics : Matlab, Latex, Open Office

References

Dr Christine Provost (Chercheur CNRS, LOCEAN, Paris) : cp@locean-ips.upmc.fr +33144273481
 Pr. Ilker Fer (Professeur, Université de Bergen, Norvège) : ilker.fer@uib.no +4755582580
 Dr. Arild Sundfjord (Institut Polaire Norvgien, Tromsø, Norvège) : arild.sundfjord@npolar.no

Peer Reviewed Publications

2022

1. **Koenig Z.**, Kalhagen, K., Kolås, E., Fer, I. and Cottier, F. (2022) AW properties, transport, and heat loss from mooring observations north of Svalbard, *Journal of Geophysical Research : Oceans*. 127(8) doi : 10.1029/2022JC018568
2. Fer, I., Baumann T., **Koenig Z.**, Muilwijk M., Tippenhauer S., Upper-ocean turbulence structure and ocean-ice drage coefficient estimates using an ascending microstructure profiler during the MOSAiC drift (2022), *Journal of Geophysical Research : Oceans*. 127(9) doi : 10.1029/2022JC018751
3. Schulz K., Mohrholz V., Fer I., Janout M., Hoppmann M., Schaffer J. and **Koenig Z.** A full year of turbulent microstructure measurements in the Arctic Ocean 2019-2020. (2022) *Scientific data*, 9(1), 1-11 doi : 10.1038/s41597-022-01574-1
4. **Koenig Z.**, Meyer, A., Provost, C., Sennéchael, N., Sundfjord, A., Beguery. L. and Gascard, J-C. Atlantic Water circulation and properties northwest of Svalbard during anomalous southerly winds (2022), *Journal of Geophysical Research : Oceans*. 127(6) doi : 10.1029/2021JC018357
5. Artana C., Provost C., **Koenig Z.**, Athanase M. and Asgari A., Atlantic Water inflow through the Yermak Pass Branch : evolution since 2007, (2022) *Journal of Geophysical Research : Oceans* 127(2) doi : 10.1029/2021JC018006
6. Kawaguchi Y., **Koenig Z.**, Nomura D., Hoppman M., Inoue J., Fang Y-C, Schulz K., Gallagher M., Katlein C., Nicolaus M., Rabe M., Turbulent Mixing During Late Summer in the Ice–Ocean Boundary Layer in the Central Arctic Ocean: Results From the MOSAiC Expedition. (2022) *Journal of Geophysical Research : Oceans* 127, doi :10.1029/2021JC017975
7. Rabe, B., Heuze C., Regnery and the Ocean Team (including **Z. Koenig**) Overview of the MOSAiC expedition : Physical Oceanography. (2022) *Elem Sci Anth*, 10(1), 00062. doi : 10.1525/elementa.2021.00062'

2021

8. **Koenig, Z.**, Kolås, E. H., & Fer, I. (2020). Structure and drivers of ocean mixing north of Svalbard in summer and fall 2018. *Ocean Science*, 1-28. doi : 10.5194/os-17-365-2021
9. Fossum, T. O.; Norgren, P.; Fer, I.; Nilsen, F.; **Koenig, Z.**; Ludvigsen, M.. (2021) Adaptive Sampling of Surface Fronts in the Arctic Using an Autonomous Underwater Vehicle. *IEEE Journal of Oceanic Engineering*.vol. 46 (4). doi : 0.1109/JOE.2021.3070912

2020

10. Kolås, E. H., **Koenig, Z.**, Fer, I., Nilsen, F., & Marnela, M. (2020). Structure and transport of Atlantic Water north of Svalbard from observations in summer and fall 2018. *Journal of Geophysical Research: Oceans*, 125(9), doi :10.1029/2020JC016174.

11. Fer, I., **Koenig, Z.**, Kozlov, I. E., Ostrowski, M., Rippeth, T. P., Padman, L., Bosse, A. & Kolås, E. (2020). Tidally forced lee waves drive turbulent mixing along the Arctic Ocean margins. *Geophysical Research Letters*, 47(16), doi : 10.1029/2020GL088083
12. **Koenig, Z.**, Fer, I., Kolås, E., Fossum, T. O., Norgren, P., & Ludvigsen, M. (2020). Observations of Turbulence at a Near-Surface Temperature Front in the Arctic Ocean. *Journal of Geophysical Research: Oceans*, 125(4), doi : 10.1029/2019JC015526.
13. Boles, E., Provost, C., Garçon, V., Bertosio, C., Athanase, M., **Koenig, Z.**, & Sennéchael, N. (2020). Under-Ice Phytoplankton Blooms in the Central Arctic Ocean: Insights From the First Biogeochemical IAOOS Platform Drift in 2017. *Journal of Geophysical Research: Oceans*, 125(3), doi : 10.1029/2019JC015608.

2019

14. Athanase M., N. Sennéchael, G. Garric, **Z. Koenig**, E. Boles and C. Provost (2019) New hydrographic Measurements of the Upper Arctic Western Eurasian Basin in 2017 Reveal Fresher Mixed Layer and Shallower Warm Layer Than 2005–2012 Climatology. *J. Geophys. Res* Doi : 10.1029/2018JC014701.

2018

15. **Koenig Z.**, A. Meyer, C. Provost, N. Sennéchael, A. Sundfjord, L. Beguery, M. Athanase and J.- C. Gascard (2018) Cooling of the West Spitsbergen Current by shelf-origin cold core lenses. *J. Geophys. Res.: Oceans*, doi: 10.1029/2018JC014463.
16. Artana C., J.-M. Lellouche, Y.-H. Park, G. Garric, **Z. Koenig**, N. Sennéchael, R. Ferrari, A. Piola, M. Saraceno and C. Provost (2018) Fronts of the Malvinas Current System: surface and subsurface expressions revealed by Satellite Altimetry, Argo Floats and Mercator Operational Model outputs. *J. Geophys. Res. Ocean*, Doi : 10.1029/2018JC013887

2017

17. Artana C., R. Ferrari, **Z. Koenig**, A. Piola, M. Saraceno and C. Provost (2017) Malvinas Current volume transport at 41°S : a 24-year long time series consistent with mooring data from 3 decades and satellite altimetry. *J. Geophys. Res. Ocean*, doi : 10.1002/2017JC013600.
18. **Koenig Z.**, C. Provost, N. Sennéchael, G. Garric and J.C. Gascard (2017b) The Yermak Pass Branch, a major pathway of the Atlantic Water north of Svalbard ? *J. Geophys. Res. Oceans*. Doi : 10.1002/2017JC013271
19. Provost C., N. Sennéchael, J. Miguet, P. Itkin, A. Rösel, **Z. Koenig**, N. Villaciers-Robineau and M. Granskog (2017) Observations of flooding and snow-ice formation in a thinner Arctic sea ice regime during the N-ICE2015 campaign: influence of basal ice melt and storms . *J. Geophys. Res. : Oceans* Doi : 10.1002/2016JC012011.
20. **Koenig Z.**, C. Provost, N. Villaciers-Robineau, N. Sennéchael, A. Meyer, J.M. Lellouche and G. Garric (2017a) Atlantic Waters inflow north of Svalbard: Insights from IAOOS observations and Mercator Ocean global operational system during N-ICE2015, *J. Geophys. Res.: Oceans* Doi : 10.1002/2016JC012424.
21. Assmy P., M. Fernández-Méndez, P. Duarte, A. Meyer, A. Randelhoff, C. J. Mundy, L. M. Olsen, H. M. Kauko, A. Bailey, M. Chierici, L. Cohen, A. P. Doulgeris, J. K. Ehn, A. Fransson, S. Gerland, H. Hop, S. R. Hudson, N. Hughes, P. Itkin, G. Johnsen, J. A. King, B. P. Koch, **Z.**

Koenig, S. Kwasniewski, S. R. Laney, M. Nicolaus, A. K. Pavlov, C. M. Polashenski, C. Provost, A. Rösel, M. Sandbu, G. Spreen, L. H. Smedsrud, A. Sundfjord, T. Taskjelle, A. Tatarek, J. Wiktor, P. M. Wagner, A. Wold, H. Steen, M. A. Granskog (2017). Leads in Arctic pack ice enable early phytoplankton blooms below snow-covered sea ice. *Scientific Reports*, 7. Doi :10.1038/srep40850.

22. Meyer A., A. Sundfjord, I. Fer, C. Provost, N. Villaciers-Robineau, **Z. Koenig**, I. H. Onarheim, L. H. Smedsrud, P. Duarte, P. A. Dodd, R.M. Graham, S. Schmidtko, H.M. Kauko (2017) Winter to summer oceanographic observations in the Arctic Ocean north of Svalbard. *J. Geophys. Res.: Oceans* Doi:10.1002/2016JC012391.

2016

23. **Koenig Z.**, C. Provost, N. Villaciers-Robineau, N. Sennéchaël and A. Meyer (2016b) Winter ocean-ice interactions under thin sea ice observed by IAOOS platforms during N-ICE2015: Salty surface mixed layer and active basal melt, *J. Geophys. Res.: Oceans* Doi : 10.1002/2016JC01219.
24. Artana C., R. Ferrari, **Z. Koenig**, M.Saraceno, A. Piola and C. Provost. (2016) Malvinas Current variability from Argo floats and satellite altimetry. *J. Geophys. Res.:Oceans* [Doi: 10.1002/2016JC011889](https://doi.org/10.1002/2016JC011889).
25. **Koenig Z.**, C. Provost, Y.-H. Park, R. Ferrari, N. Sennéchaël (2016a) Anatomy of the Antarctic Circumpolar Current through Drake Passage, *J. Geophys. Res.: Oceans* Doi 10.1002/2015JC011436.

2014

26. **Koenig Z.**, C. Provost, R. Ferrari, N. Sennechaël, M.-H. Rio (2014) Volume transport of the Antarctic Circumpolar Current. Part I : production and validation of a 20-year-long transport time series obtained from in situ and satellite observations. *J. Geophys. Res.:Oceans* Doi 10.1002/2014JC009966.
27. Ferrari R., C. Provost, Y.-H. Park, N. Sennéchaël, **Z. Koenig**, H. Sekma, G. Garric, R. Bourdallé-Badie (2014) Heat fluxes across the Antarctic Circumpolar Current in Drake Passage: mean flow and eddy contributions. *J. Geophys. Res.: Oceans* Doi 10.1002/2014JC010201.

Datasets

1. Schulz, K.; Mohrholz, V.; Fer, I.; Janout, M. A; Hoppmann, M.; Schaffer, J.; **Koenig, Z.**; Rabe, B.; Heuzé, C.; Regnery, J.; Allerholt, J.; Fang, Y-C; He, H.; Kanzow, T.; Karam, S.; Kuznetsov, I.; Kong, B.; Liu, H.; Muilwijk, M.; Schuffenhauer, I.; Sukhikh, N.; Sundfjord, A.; Tippenhauer, S. (2022): Turbulent microstructure profile (MSS) measurements from the MOSAiC drift, Arctic Ocean. *PANGAEA*, <https://doi.org/10.1594/PANGAEA.939816>
2. Baumann, T., Fer, I., Bryhni, H., Peterson, A. K; Allerholt J.; Fang, Y-C; Hoppmann, M; Karam, S; **Koenig, Z**; Kong, B; Mohrholz, V; Muilwijk, M.; Schaffer, J.; Schulz, K.; Sukhikh, N.; Tippenhauer, S. (2021): Under-ice current measurements during MOSAiC from a 75 kHz acoustic Doppler profiler. *PANGAEA*, doi: 10.1594/PANGAEA.934792
3. Labaste M., Provost C., Athanase M., Artana C., **Koenig Z.**, Asgari A. (2021). Mooring data at Yermak pass from September 2017 to July 2020. SEANOE. <https://doi.org/10.17882/83214>

4. Fer I., **Koenig Z.**, Bosse A., Falck E., Kolås E., Nilsen F. (2020) Physical oceanography data from the cruise KB2018616 with R.V. Kristine Bonnevie. <https://doi.org/10.21335/NMDC-2047975397>
5. Fer I., **Koenig Z.**, Kolås E., Falck E., Fossum T., Ludvigsen M., Marnela M., Nilsen F., Norgren P. and Skogseth R. (2019) Physical oceanography data from the cruise KH 2018709 with R.V. Kronprins Haakon, 12-24 September 2018 <https://doi.org/10.21335/NMDC-2039932526>
6. Villaceros-Robineau N., Calzas M., Guillot A., Savy J.-P., Drezen C., Garracio M., **Koenig Z.**, Sennechael N., Durand I., Provost C. (2019). IAOOS winter hydrographic data during N-ICE 2015 North of Svalbard. SEANOE. <https://doi.org/10.17882/59516>
7. Sennéchael N., Provost C., Villaceros-Robineau N., Calzas M., Guillot A., Savy J.-P., Garracio M., **Koenig Z.** (2019). IAOOS winter SIMBA data during N-ICE 2015 North of Svalbard. SEANOE. <https://doi.org/10.17882/59624>
8. Provost C., Kartavtseff A., Lee J. H., Sennéchael N., Lanoisellé J., Ferrari R., **Koenig Z.**, Artana C., Durand I. (2019). Drake current-meter mooring velocity data (2006-2008). SEANOE. <https://doi.org/10.17882/61186>
9. Provost C., Kartavtseff A., Lee J. H., Sennéchael N., Lanoisellé J., Ferrari R., **Koenig Z.**, Artana C., Durand I. (2019). Drake current-meter mooring velocity data (2008-2009). SEANOE. <https://doi.org/10.17882/61214>
10. Koenig Z. Beguery L., Provost C., Meyer A., Sundfjord A., Gascard J.-C. (2017). SeaExplorer glider SEA028 observations North of Svalbard in September 2017. SEANOE. <https://doi.org/10.17882/81755>
11. **Koenig Z.**, Beguery L., Provost C., Meyer A., Sundfjord A., Athanase M., Gascard J.-C. (2017). SeaExplorer glider SEA028 observations West of Svalbard in July 2017. SEANOE. <http://doi.org/10.17882/56366>
12. Provost C., **Koenig Z.**, Sennéchael N., Athanase M., Labaste M., Garçon V. (2017). Arctic Western Eurasian Basin: IAOOS 23 and IAOOS 24 ocean CTD-DO, CDOM and nitrate profiles in 2017. SEANOE. <https://doi.org/10.17882/57288>
13. Provost C., Sennéchael N., Garçon V., Boles E., Athanase M., **Koenig Z.**, Labaste M. (2017). Arctic Western Eurasian Basin: IAOOS 23 physical and biogeochemical profiles in 2017. SEANOE. <https://doi.org/10.17882/59183>
14. Gascard J.-C., Beauverger M., Lanoisellé J., Le Goff H., **Koenig Z.** and Provost C. (2017). ADCP mooring data in 2007-2008 north of Svalbard over the Yermak Plateau in the Yermak Pass. SEANOE. <http://doi.org/10.17882/51023>
15. Meyer, A., Fer, I., Sundfjord, A., Peterson, A. K., Smedsrud, L. H., Muilwijk, M., ... KusseTiuz, N. (2016). N-ICE2015 ocean microstructure profiles (MSS90L) [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2016.774bf6ab>
16. Dodd P., Meyer A., Fransson A., Duarte P., Koenig Z., Cooper A., Smedsrud L.H., Hendry K., Rerolle V., Silyakova A., Kusse-Tiuz N., Miguet J., Davis P. (2016) N-ICE2015 bottle data from ship water sampler [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2016.7f7e56d0>

17. Dodd, P., Meyer, A., **Koenig, Z.**, Cooper, A., Smedsrud, L. H., Muilwijk, M., ... Randelhoff, A. (2016). N-ICE2015 ship-based conductivity-temperature-depth (CTD) data [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2017.92262a9c>
18. Dodd, P., Meyer, A., Fransson, A., **Koenig, Z.**, Cooper, A., Duarte, P., ... Davis, P. (2016). N-ICE2015 bottle data from on-ice water sampler [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2016.089354c2>
19. Dodd, P. A., Meyer, A., Fransson, A., Duarte, P., **Koenig, Z.**, Cooper, A., ... Davis, P. (2016). N-ICE2015 bottle data from ship water sampler [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2016.516bc529>

Reports

1. Nilsen F., Fer I., Baumann T., Breivik Ø., Czyv C., Frank L., Kalhagen K., **Koenig Z.**, Kolås E., Kral S., Mabrouk M., Mo-Bjørkelund T., Müller M. and Rabault J., PC-2 Winter Process Cruise (WPC) (2021) : Cruise Report. *The Nansen Legacy Report Series*, (3) doi: 10.7557/nlrs.6324
2. Fer, I., Nilsen, F., Bosse, A., Falck, E., Fossum, T., Hole, L.R., **Koenig, Z.**, Kolås, E., Libæk, A.D., Lincoln, B., Ludvigsen, M., Marnela M., Müller M., Norgren P., Næss I.L., Rabault J., Siedl A., Skogseth R. and Utkilen I., (2020). Physical Process Cruise 2018. *The Nansen Legacy Report Series*, (2). doi: 10.7557/nlrs.5503_
3. Fer, I., Nilsen, F., Falck, E., Bosse, A., **Koenig, Z.**, & Peterson, A. (2018). Ocean Mixing Process Study 2018. *The Nansen Legacy Report Series*, (1). doi: 10.7557/nlrs.5504_

Thesis

1. **Koenig Z.**, (2017). Atlantic Water properties and circulation North of Svalbard in a changing Arctic. PhD Thesis, UPMC, Paris, France. October 2017

Oral communications

Z. Koenig, Kolås E., Kallaghan K., Fer I., Nilsen F. and Cottier F. « Atlantic Water properties, transport and water mass transformation north of Svalbard from one-year-long mooring observations » (Talk), *online EGU 2021*, Vienna, Austria

Z. Koenig, Kolås, E. and Fer, I. « Structure and drivers of ocean mixing North of Svalbard in summer and fall 2018 » (Talk), *online Arctic Frontiers 2021*, Tromsø, Norway

Z. Koenig, I. Fer, E. Kolås, T. Fossum, P. Norgren, and M. Ludvigsen « Observations of turbulence at a near-surface temperature front in the Arctic Ocean » (Poster), *online EGU 2020*, Vienna, Austria

Z. Koenig, E. Kolås, K. Kalhagen, and I. Fer « The Atlantic Water boundary current North of Svalbard in 2018-2019: background properties, dynamics and turbulence » (Solicited Talk), *online EGU 2020*, Vienna, Austria

Z. Koenig, E. Kolås, I. Fer, R. Skogseth, M. Marnela and F. Nilsen, « Turbulence north of Svalbard in summer 2018: mixed layer evolution and Atlantic Water layer dynamics » (Poster), *Ocean Science Meeting 2020*, San Diego, USA

Z. Koenig, I. Fer, E. Kolås, T. Fossum, P. Norgren and M. Ludvigsen « Dynamics of a surface front in the Arctic : a case study » (Talk) *FAMOS meeting 2019*, Copenhagen, Denmark.

Z. Koenig, C. Provost, N. Sennéchaël, A. Meyer, G. Garric and J.-C. Gascard. « Atlantic Water circulation and properties North of Svalbard in a changing Arctic » (Talk) *Polar 2018 Conference*, Davos, Switzerland

Z. Koenig, C. Provost, N. Sennéchaël, G. Garric and J.-C. Gascard « The Yermak Pass Branch : a major pathway for the Atlantic Water north of Svalbard ? » (Talk) *ASOF meeting 2018*, Paris, France

Z. Koenig, C. Provost, N. Sennéchaël, A. Meyer, G. Garric and J.-C. Gascard. « Atlantic Water circulation and properties North of Svalbard in a changing Arctic » (Talk) *Invited Seminar at LOPS*, Brest 2018 , France

Z. Koenig, C. Provost, N. Sennéchaël, G. Garric and J.-C. Gascard « The Yermak Pass Branch : a major pathway for the Atlantic Water north of Svalbard ? » (Poster) *Ocean Science Meeting 2018*, Portland, USA

Z. Koenig, C. Provost, N. Sennéchaël, A. Meyer, G. Garric and J.-C. Gascard. « Atlantic Water circulation and properties North of Svalbard in a changing Arctic » (Talk) *Seminar at NPI*, Jan 2018, Tromsø, Norway

Z. Koenig, C. Provost, N. Sennéchaël, G. Garric, J.-C. Gascard, A. Meyer « IAOOS in Ice Arc, focus on the Atlantic Water circulation and properties North of Svalbard in a changing Arctic » (Talk) *ICE-Arc General Assembly*, Barcelona, Spain.

Z. Koenig, C. Provost, N. Villaceros-Robineau, N. Sennéchaël, A. Meyer, J.-M. Lellouche and G. Garric « Atlantic water inflow and ice-ocean interactions north of Svalbard in winter from IAOOS observations and Mercator Ocean model outputs » (Talk), *ASOF meeting 2017*, Sopot, Poland.

Z. Koenig, C. Provost, N. Villacieros-Robineau, N. Sennéchaël, A. Meyer « Atlantic water inflow and winter ocean-ice interactions north of Svalbard from IAOOS platforms during N-ICE2015 » (Poster), *AGU Fall meeting 2016*, San Francisco, USA

Z. Koenig, C. Provost, N. Villacieros-Robineau, N. Sennéchaël, A. Meyer, J-M. Lellouche and G. Garric « Atlantic Water inflow North of Svalbard: insights from IAOOS observations and Mercator Ocean global operational system during N-ICE2015 » (Poster), *AGU Fall meeting 2016*, San Francisco, USA

Z. Koenig, C. Provost, Y.-H. Park, R. Ferrari, N. Sennéchaël « Anatomy of the Antarctic Circumpolar Current through Drake Passage » (Poster), *Ocean Surface Topography Science Team meeting 2016*, La Rochelle, France

Z. Koenig, C. Provost, N. Villacieros-Robineau, N. Sennéchaël, A. Meyer, J-M. Lellouche and G. Garric « Atlantic water inflow and ice-ocean interactions north of Svalbard in winter from IAOOS observations and Mercator Ocean model outputs » (Poster), *FAMOS meeting 2016*, Woods Hole Institute of Oceanography, USA.

Z. Koenig, C. Provost, N. Villacieros-Robineau, N. Sennéchaël, A. Meyer, J-M. Lellouche and G. Garric « Atlantic water inflow and ice-ocean interactions north of Svalbard in winter from IAOOS observations and Mercator Ocean model outputs. » (Talk), *Ice-Arc European project (FP7) General Assembly 2016*, Malangen, Norway.

Z. Koenig, C. Provost, N. Sennéchaël, N. Villacieros-Robineau, G. Garric, J. Miguet, A. Meyer, M. Calzas. « Properties and upwelling of the Atlantic Water North of Svalbard documented from IAOOS platforms : sea ice basal melt in winter. », (Poster) *Ocean Science Meeting 2016*, New Orleans, USA.

Z. Koenig, C. Provost, Y.-H. Park, R. Ferrari, N. Sennéchaël « Anatomy of the Antarctic Circumpolar Current through Drake Passage » (Poster), *Ocean Science Meeting 2016*, New Orleans, USA.

Z. Koenig, C. Provost, N. Sennéchaël, N. Villacieros-Robineau, G. Garric « Upper layer stratification and eddies from North Pole to Fram Strait » (Poster), *Ice-Arc European project (FP7) Général Assembly 2015*, Italy, Bolona.

Z. Koenig, C. Provost, R. Ferrari, Y.H. Park, N. Sennéchaël «A 20-year long volume transport time series of the Antarctic Circumpolar Current obtained from in situ and satellite observations. Part II: Analysis of the variations » (Poster), *EGU 2014* Vienna, Austria.

Z. Koenig, C. Provost, R. Ferrari, N. Sennéchaël and M.H. Rio « Volume transport of the Antarctic Circumpolar Current at Drake Passage. Production and validation of a 20-year-long time series obtained from in situ and satellite observations. » (Talk), *EGU 2014*, Vienna, Austria.

Contribution en co-auteur à plus de 40 communications en conférence internationale.