

PERSONAL INFORMATION

Family name, First name: **Eldevik, Tor**

Research ID: <https://scholar.google.no/citations?user=Ha2AsL4AAAAJ>

Date of birth: **28.02.1970; male; married; 2 daughters; Norwegian**

URL for web sites folk.uib.no/tel083; www.uib.no/persons/Tor.Eldevik; twitter @TorEldevik

EDUCATION

1996 – 2000 Doctor scientiarum (Dr. scient.), Department of Mathematics, University of Bergen, Norway
 1998 – 1999 Honorary Associate, School of Mathematics, Uni. of New South Wales, Sydney, Australia
 1989 – 1995 Candidatus scientiarum (Cand. scient.), Dept. of Mathematics, University of Bergen, Norway

CURRENT POSITION

2019 – Head of Department, Geophysical Institute, University of Bergen, Norway
 2013 – Full professor, Geophysical Institute, University of Bergen, Norway

PREVIOUS RELEVANT WORK EXPERIENCE, selected

2014 – 2019 Deputy director, Bjercknes Centre for Climate Research, Bergen, Norway
 2012 – 2019 Research leader, Bjercknes Centre for Climate Research, Bergen, Norway
 2010 – 2013 Associate professor, Geophysical Institute, University of Bergen, Norway
 2006, 2009 3.5 + 3.5 months of paternal leave
 2001– 2010 Research scientist/deputy leader, G.C. Rieber Climate Institute, Nansen Environmental and Remote Sensing Center, Bergen, Norway
 2000 – 2001 Associate professor (temporary appointment), Dept. of Math., University of Bergen
 1995 Teacher, Mathematics and Computing, Bergen Federal Penitentiary, Norway
 1990 – 1991 Radar operator, Royal Norwegian Navy, *KNM Gnist*, 22nd MTB Squadron

FELLOWSHIPS AND AWARDS, not including student awards

2014 Nansen Medal, the Norwegian Academy of Science and Letters

MAJOR GRANTS AND MANAGEMENT SKILLS, selected

I have received three major grants as principal investigator and have in general had leadership responsibility in the projects I have been part of – including during their proposal phase. My leadership of the Geophysical Institute, at different levels at the Bjercknes Centre, in the national consortium of the *The Nansen Legacy*, in boards and panels of the Research Council of Norway, underscores my substantial management skills.

2018 – 2023 Trond Mohn Foundation, *Bjercknes Climate Prediction Unit (unit co-leader)*
 2017 – 2023 Norwegian Ministry of Education and Research Council of Norway (RCN), *The Nansen legacy*, establishing the knowledge base for the future Barents Sea (**project co-leader**)
 2017 – 2021 EU H2020, *Blue Action: Arctic Impact on Weather and Climate (task leader)*
 2015 – 2016 Research leader programme, University of Bergen, Norway
 2014 – 2017 RCN, *NORTH: NORthern constraints on the Atlantic ThermoHaline circulation (project leader)*
 2011 – 2015 Bjercknes Centre strategic project, *PRACTICE: Predictability of Arctic/North Atlantic climate (project leader)*
 2008 – 2012 EC Environment, *THOR: Thermohaline Circulation - at Risk? (core theme co-leader)*
 2007 – 2010 Research Council of Norway, *POCAHONTAS: Polar Climate and Heat Transport (project co-leader)*

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2010 – 4 Postdoctoral fellows / 8 PhD students / 5 Master students
 Geophysical Institute, University of Bergen, Norway
 2001 – 2010 1 Postdoctoral fellow/ 4 PhD students
 Nansen Environmental and Remote Sensing Center, Bergen, Norway
 1999 – 2001 2 Master students, Department of Mathematics, University of Bergen, Norway

Previous mentoring includes: Ingvild Lygren, MSc student; now PeTec leader Equinor / Natasha Ridenour, MSc; PhD student UAlberta / Dorotea Iovino, PhD; scientist CMCC, Bologna / Erwin Lambert, PhD; postdoc UUtrecht / Helene Langehaug PhD; researcher NERSC / Ben Marzeion, PhD; professor UBremen / Ingrid H. Onarheim, PhD; Equinor trainee programme / Marius Årthun, postdoc; researcher UBergen / Carina Bringedal, postdoc; postdoc Jr Professor UStuttgart / Mirjam Glessmer, postdoc; programme manager GEO magazine / Kevin Oliver, postdoc; lecturer USouthampton / Kjetil Våge, postdoc; researcher UBergen

TEACHING ACTIVITIES, selected

- 2010 – *Graduate/bachelor level*, Data Analysis in Meteorology and Oceanography (2010–2012, 2017); Geophysical Institute, University of Bergen, Norway
- 1999 – 2005 *Graduate/bachelor level*, different courses in calculus, differential equations, hydrodynamics; Department of Mathematics, University of Bergen, Norway
- 1995 *High school-level*, Mathematics and Computing, Bergen federal penitentiary (Åsane vide-regående skole, avd. Bergen landsfengsel), Norway

ORGANISATION OF CONFERENCES, MEETINGS, selected

- 2018 Co-convener *Seeing the Future: Predicting Variability and Change of the Polar Climate and Environment*. POLAR2018, Davos, Switzerland.
- 2015 Co-chair *Moana, the Rising Ocean: The Pacific Islands and Global Climate Change*. International symposium in collaboration with the Bergen International Festival, 29/5/2015
- 2015 Leader scientific committee *Arctic climate change – global implications*, Arctic Frontiers, Tromsø, 18–23/1/2015
- 2008 Convener *The Nordic Seas and the North Atlantic's Subpolar Gyre: Similarities, Differences, and Interconnection*, ASLO/AGU 2008 Ocean Sciences, Orlando, 2–7/3/2008

INSTITUTIONAL RESPONSIBILITIES, selected

- 2017 – 2019 Member *Faculty board*, Faculty of Mathematics and Natural Sciences, University of Bergen
- 2010 – Six times PhD committee leader, University of Bergen, Norway
- 2010 – Member of several selection committees for researcher, postdoctoral, and PhD positions, University of Bergen, Norway
- 2004 – Member Bjerknes Centre for Climate Research *Leader Group*

COMMISSIONS OF TRUST, selected

- 2019 – Board member *Climate and Polar Portfolio* Research Council of Norway
- 2018 – Coordinator of The European Academies' Science Advisory Council's (EASAC) project *Changes in ocean circulation and consequences for European coastal regions*
- 2018 Member Norwegian delegation, *2nd Arctic Science Ministerial*, Berlin, Germany.
- 2017 – Co-task leader CLIVAR/CLIC *NORP Northern Oceans Regional Panel*
- 2016 – University of Bergen representative steering committee, *Arctic Frontiers*
- 2015 – International Scientific Steering Group, *ASOF Arctic–Subarctic Ocean Fluxes*

REVIEWER, selected

Journals Bull Am Met Soc, Clim Dyn, Deep Sea Res, Geophys Res Lett, J Climate, J Fluid Mech, J Geophys Res, J Phys Oceanogr, Nature Climate Change, Nature Geoscience, Polar Res, Science, Tellus; *Proposals/reports* The German Federal Ministry of Education and Research (BMBF), Intergovernmental Panel on Climate Change (IPCC), Natural Environment Research Council (NERC), US National Science Foundation (NSF); *Other* Proceedings of the 2017 conference for YOUNg MARine REsearchers (Springer)

INVITED OUTREACH, summary

I have given about 30 invited peer presentations including the opening presentation of the ACSIS – OSNAP – RAPID Joint Science Meeting *Understanding Change and Variability in the North Atlantic Climate System*, Oxford, UK, Sept 2017. I have been in public debate sessions with, or given briefings for, e.g., the Norwegian Prime Minister Ms Erna Solberg, and the ministers of Foreign Affairs, Climate and Environment, and Petroleum and Energy; the Canadian Minister of Fisheries and Oceans; the European Commission's Director DG Climate Action and MEPs at the European Parliament, Brussels.

PUBLICATIONS

My research focus is the role of the northern seas in climate in past, present, and future climate variability and change, including predictability and underlying mechanisms. I have authored or co-authored 42 peer review publications, including in the high-ranking *Nature Geoscience*, *Annual Review of Earth and Planetary Sciences*, *Reviews of Geophysics*, and *Quaternary Science Reviews* journals. According to Google Scholar, the “Top 20” of these have been cited about 1600 times (average citation rate of 78). I have worked extensively with combining observations, analytical considerations and ocean/climate models to understand a variable northern climate.

Popular outreach: I have contributed about **50** popular science articles, incl. newspaper op-eds.

Twenty representative publications, mostly recent, and number of citations (Google Scholar)

1. Smedsrud, L.H., I. Esau, R.B. Ingvaldsen, **T. Eldevik**, P.M. Haugan, C. Li, V.S. Lien, A. Olsen, A.M. Omar, O.H. Otterå, B. Risebrobakken, A.B. Sandø, V.A. Semenov, and S.A. Sorokina, 2013: The role of the Barents Sea in the Arctic climate system. *Rev. Geophys.*, **51**, 415–449. (271 citations)
2. Årthun, M., **T. Eldevik**, L.H. Smedsrud, Ø. Skagseth, and R. Ingvaldsen, 2012: Quantifying the influence of Atlantic heat on Barents Sea ice variability and retreat. *J. Climate*, **25**, 4736–4743. (265*)
3. **Eldevik, T.**, J.E.Ø. Nilsen, D. Iovino, K.A. Olsson, A.B. Sandø, and H. Drange, 2009: Observed sources and variability of Nordic seas overflow. *Nature Geoscience*, **2**, 406–410. (136)
4. Onarheim, I.H., **T. Eldevik**, L.H. Smedsrud, and J.C. Stroeve, 2018: Seasonal and regional manifestation of Arctic sea ice loss. *J. Climate*, **31**, 4917–4932. (59*)
5. Medhaug, I., H.R. Langehaug, **T. Eldevik**, T. Furevik, and M. Bentsen, 2012: Mechanisms for decadal scale variability in a simulated Atlantic Meridional Overturning Circulation. *Clim. Dyn.*, **39**, 77–93. (59*)
6. Årthun, M., **T. Eldevik**, E. Viste, H. Drange, T. Furevik, H.L. Johnson, and N.S. Keenlyside, 2017: Skillful prediction of northern climate provided by the ocean. *Nature Comm.*, **8**, DOI: 10.1038/ncomms15875. (56*)
7. **Eldevik, T.**, B. Risebrobakken, A.E. Bjune, C. Andersson, H.J.B. Birks, T.M. Dokken, H. Drange, M.S. Glessmer, C. Li, J.E.Ø. Nilsen, O.H. Otterå, K. Richter, and Ø. Skagseth, 2014: A brief history of climate – the northern seas from the Last Glacial Maximum to global warming. *Quat. Sci. Rev.*, **106**, 225–246. (49)
8. Langehaug, H.R., I. Medhaug, **T. Eldevik**, and O.H. Otterå, 2012: Arctic/Atlantic exchanges via the Subpolar Gyre. *J. Climate*, **25**, 2421–2439. (47*)
9. **Eldevik, T.** and J.E.Ø. Nilsen, 2013: The Arctic–Atlantic thermohaline circulation. *J. Climate*, **26**, 8698–8705. (30)
10. Glessmer, M.S., **T. Eldevik**, K. Våge, J.E.Ø. Nilsen, and E. Behrens, 2014: Atlantic origin of observed and modelled freshwater anomalies in the Nordic Seas. *Nature Geoscience*, **7**, 801–805. (29*)
11. Oliver, K.I.C., **T. Eldevik**, D.P. Stevens and A. Watson, 2008: A Greenland Sea perspective on the dynamics of post-convective eddies. *J. Phys. Oceanogr.*, **38**, 2755–2771. (20*)
12. Ferreira, D., P. Cessi, H. Coxhall, A. de Boer, H.A. Dijkstra, S.S. Drijfhout, **T. Eldevik**, N. Harnik, J.F. McManus, D.P. Marshall, J. Nilsson, F. Roquet, T. Schneider, and R.C. Wills, 2018: Atlantic-Pacific Asymmetry in Deep-Water Formation. *Ann. Rev. Earth Pl. Sci.*, **46**:1. (20)
13. Årthun, M., **T. Eldevik**, and L.H. Smedsrud, 2019: The role of Atlantic heat transport in future Arctic winter sea ice loss. *J. Climate*, **32**, 3327–3341. (11)
14. Bringedal, C., **T. Eldevik**, Ø. Skagseth, M. Spall, and S. Østerhus, 2018: Structure and forcing of observed exchanges across the Greenland-Scotland Ridge. *J. Climate*, **31**, 9881–9901. (8*)
15. Asbjørnsen, H., M. Årthun, Ø. Skagseth, and **T. Eldevik**, 2019: Mechanisms of ocean heat anomalies in the Norwegian Sea. *J. Geophys. Res.*, **124**, 2908–2923. (6*)
16. Lambert, E., **T. Eldevik**, and P.M. Haugan, 2016: How northern freshwater input can stabilize thermohaline circulation. *Tellus A*, **68**, 31051, DOI 10.3402/tellusa.v68.31051. (6*)
17. Årthun, M., E.W. Kolstad, **T. Eldevik**, and N.S. Keenlyside, 2018: Time scales and sources of European temperature variability. *Geophys. Res. Lett.*, **45**, 3597–3604. (4)
18. **Eldevik, T.** and P.M. Haugan, 2020: That’s a lot of water. *Nature Physics*, **16**, 496–496. (0)
19. **Eldevik, T.**, L.H. Smedsrud, C. Li, M. Årthun, E. Madonna, and L. Svendsen, 2020: The Arctic Mediterranean. *Interacting Climates of Ocean Basins: Observations, Mechanisms, Predictability, and Impacts*, C.R. Mechoso, Ed., CUP, in press. (0)
20. Skagseth, Ø., **T. Eldevik**, M. Årthun, H. Asbjørnsen, V. Lien, and L.H. Smedsrud, 2020: Reduced efficiency of the Barents Sea cooling machine. *Nature Clim. Change*, in press. (0)

In the above, (*) indicates supervisor/mentorship role.