

## Short CV with publication list: ILKER FER

**Last name, First name** : FER, Ilker  
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### Current Position

Professor, physical oceanography, Geophysical Institute, University of Bergen  
Also affiliated with the Bjerknes Centre for Climate Research

### Education

2001 Ph.D. Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland.  
1997 M.Sc. Institute of Science and Technology, Technical University of Istanbul, Turkey.  
1995 Civil engineer. Technical University of Istanbul, Turkey.

### Appointments and mobility

2008 – present Professor, Geophysical Inst. (GFI), Univ. of Bergen (UoB)  
2013 – 2014 Sabbatical at Scripps Institution of Oceanography, La Jolla, USA  
2007 – 2008 Associate professor, GFI, UoB  
2004 – 2007 Scientist, Bjerknes Centre for Climate Research (BCCR)  
2002 – 2004 Post-doctoral researcher, GFI, UoB  
2001 – 2002 Scientist, GFI, UoB

### Institutional Responsibilities

2015- on Leader of the “*Physical Oceanography*” Research Group, GFI, UoB  
2011- on Scientific cruise coordinator for UoB  
2009-2011 Leader of the program-board, GFI, UoB,  
2009-2011 Member of the study-board of the Mat-Nat faculty, UoB  
2007- 2015 Co-leader, “*Physical Oceanography*” Research Group, GFI, UoB  
2006- 2013 Co-leader, “*Ocean-Ice-Atmosphere Processes*” Research Group, BCCR

### Awards and fellowships

2017 Georg Wüst Prize 2017  
2017 – on Honorary lifetime member of the German Society for Marine Research  
2002 – 04 Postdoctoral Scholarship (FRINAT, Research Council of Norway)

### Commissions of Trust

2017 – on Editor, *Ocean Dynamics*  
2016 – on Editor, *Journal of Physical Oceanography*  
2012 External reviewer for the PhD thesis of Eefke van der Lee, Leibniz-Institute for Baltic Sea Research, Rostock-Warnemuende, Germany  
2012 – 14 PhD committee member for Tamara Beitzel, LOCEAN-UPMC, Paris, France

2010 External reviewer, PhD thesis of Fernando Jardon, LOCEAN-UPMC, Paris  
Active reviewer for scientific journals including JPO, JGR, GRL, CSR, DSR, L&O, JTECH, Ocean Sci., Ocean Dyn., Aquatic Sci.  
Reviewer for national research agencies for USA, UK, Sweden, Germany, France and New Zealand.

### Research Expeditions Led

Led more than 20 expeditions at sea or sea ice since 2000, including the North Pole drift stations Borneo (2007 and 2008). Last 5 years:

R/V Kristine Bonnevie (# 2017 606), Vortex dynamics and mixing in the Lofoten Basin  
R/V Håkon Mosby (# 2016 611), Vortex dynamics and mixing in the Lofoten Basin  
R/V Håkon Mosby (# 2015 617), Mixing processes in the Marginal Ice Zone, North of Svalbard  
R/V Håkon Mosby (# 2014 619), Mixing processes in the Marginal Ice Zone, North of Svalbard  
R/V Håkon Mosby (# 2014 629 and 2013 627), Air-sea interaction, Southern Norwegian shelf

### Scientific Projects Led (last 5 years)

2016 –20 Watermass transformation processes and vortex dynamics in the Lofoten Basin of the Norwegian Sea, RCN (FRINAT, RCN-funded/total budget: 9/15 mil.NOK)  
2014 – 17 On Thin Ice: Role of Ocean Heat Flux in Sea Ice Melt, RCN (NORKLIMA, 6/7 mil.NOK)  
2011 – 15 Faroe Bank Channel Overflow: Dynamics and Mixing, RCN (FRINAT, 10/15 mil.NOK)  
2011 – 14 Antarctic ice shelves and ocean climate, RCN (NARE, 5/7 mil. NOK)  
2010 – 13 Arctic Ocean Mixing, RCN (POLRES, NOR-USA)  
2010 – 13 Internal hydraulic processes in an Arctic fjord, RCN (POLRES, NOR-RUS)

### Teaching

(on sabbatical at Scripps Institution of Oceanography, Jan.- Aug. 2013)

2007- on Teaching at GFI, UIB on topics:  
Physical oceanography of fjords (GEOF337); Turbulence in the ocean (GEOF310)  
Introduction to dynamics of ocean and atmosphere (GEOF110);  
Introduction to Master's thesis work (GEOF301)

### Advisee

Ph.D: Current: A. K. Peterson, K. L. Daae, J. S. Dugstad, A. Randelhoff (co-adv., 2017)  
M. B. Paskyabi (2014), K. S. Sponheim (2011), F Geyer (2010, co-adv.)  
A. Sirevaag (2009, co-adv.), A Sundfjord (2007, co-adv.), K. Widell (2006, co-adv.)  
M.Sc.: Current: Eivind Kolås, Hauk M Løvseth  
T. Fjellsbø (2013), A. K. Peterson (2013), M. Jensen (2012), A. Meyer (2011), I. R.-Baroni (2008), K. L. Daae (2008), K. Richter (2005)

### Invited talks

The Royal Society of Edinburgh, Scotland (2015), Arctic Frontiers, Tromsø, Norway (2011), EGU, Vienna, Austria (2010), MOCA-09 IAPSO Symposia, Montreal Canada (2009), Norwegian Academy of Sciences, Oslo (2008), ASLO/AGU Ocean Sciences Meeting, Orlando, USA (2008), Univ. of Wales, Bangor, UK (2006).

## List of publications

**Last 5 years, peer-reviewed articles only** (see <http://folk.uib.no/ngfif/> for a complete list).

81. Meyer, A., **Fer, I.**, Sundfjord, A. and Peterson, A. K. (2017), Mixing rates and vertical heat fluxes north of Svalbard from Arctic winter to spring. *J. Geophys. Res.*, 10.1002/2016JC012441
80. Daae, K., T. Hattermann, E. Darelius, and **I. Fer** (2017), On the effect of topography and wind on warm water inflow—An idealized study of the southern Weddell Sea continental shelf system, *J. Geophys. Res.*, 10.1002/2016JC012541.
79. **Fer, I.**, A. K. Peterson, A. Randelhoff, and A. Meyer (2017), One-dimensional evolution of the upper water column in the Atlantic sector of the Arctic Ocean in winter, *J. Geophys. Res.*, 10.1002/2016JC012431.
78. Peterson, A. K., **I. Fer**, M. G. McPhee, and A. Randelhoff (2017), Turbulent heat and momentum fluxes in the upper ocean under Arctic Sea Ice, *J. Geophys. Res.*, 10.1002/2016JC012283.
77. Randelhoff, A., **I. Fer**, and A. Sundfjord (2017), Turbulent upper-ocean mixing affected by meltwater layers during Arctic summer, *J. Phys. Oceanogr.*, 10.1175/jpo-d-16-0200.1.
76. Meyer, A., A. Sundfjord, **I. Fer**, et al. (2017), Winter to summer oceanographic observations in the Arctic Ocean north of Svalbard, *J. Geophys. Res.*, 10.1002/2016JC012391.
75. Darelius, E., **I. Fer**, K.W. Nicholls (2016). Observed vulnerability of Filchner-Ronne Ice Shelf to wind-driven inflow of warm deep water, *Nat. Comm.*, doi: 10.1038/NCOMMS12300
74. Randelhoff, A., **I. Fer**, A. Sundfjord, J.-E. Tremblay and M Reigstad (2016). Vertical fluxes of nitrate in the seasonal nitracline of the Atlantic sector of the Arctic Ocean, *J. Geophys Res.*, doi: 10.1002/2016JC011779
73. Hole, L. R., **I. Fer**, and D. Peddie (2016). Directional wave measurements using an autonomous vessel, *Ocean Dyn.*, doi: 10.1007/s10236-016-0969-4
72. Guo C., M. Ilıcak, M. Bentsen, **I. Fer** (2016). Characteristics of the Nordic Seas overflows in a set of Norwegian Earth System Model experiments, *Ocean Modell.* doi:10.1016/j.ocemod.2016.06.004.
71. **Fer, I.**, E. Darelius, and K. B. Daae (2016). Observations of energetic turbulence on the Weddell Sea continental slope, *Geophys. Res. Lett.*, 43, doi:10.1002/2015GL067349
70. Zhou, S.-Q., Y.-Z. Lu, X.-L. Song, **I. Fer** (2016). New layer thickness parameterization of diffusive convection in the ocean. *Dynam. Atmos. Oceans*, 73: 87-97, doi:10.1016/j.dynatmoce.2016.01.001.
69. Ullgren, J, E. Darelius, and **I. Fer** (2016). Volume transport and mixing of the cold water overflow downstream of the Faroe Bank Channel from one year of moored measurements, *Ocean Sci.*, 12, 451-470, doi:10.5194/os-12-451-2016.
68. Bakhoday Paskyabi, M., H.T. Bryhni, J. Reuder, and **I. Fer** (2015). Lagrangian measurement of waves and near surface turbulence from acoustic instruments. *Energy Procedia*, 80, 141-150.
67. Darelius, E., **I. Fer**, T. Rasmussen, C. Guo, and K.M.H. Larsen (2015). On the modulation of the periodicity of the Faroe Bank Channel overflow instabilities, *Ocean Sci.*, 11, 855-871.
66. Guthrie, J., **I. Fer**, and J. Morison (2015). Observational validation of the diffusive convection flux laws in the Amundsen Basin, Arctic Ocean. *J. Geophys. Res.*, 10.1002/2015JC010884.
65. **Fer, I.**, M. Müller, and A. K. Peterson (2015). Tidal forcing, energetics, and mixing near the Yermak Plateau. *Ocean Sci.*, 11, 287-304, doi:10.5194/os-11-287-2015.
64. Carmack E. and 17 co-authors incl. **I. Fer** (2014). The new Arctic: towards quantifying the increasing role of oceanic heat in sea ice loss. *Bull. Am. Met. Soc.*, 96, 2079–2105.

63. Ghani M.H., L. R. Hole , **I. Fer**, et al. (2014), The SailBuoy remotely-controlled unmanned vessel: measurements of ... in the Northern Gulf of Mexico, *Methods in Oceanogr.*, 10, 104-121.
62. Darelius, E., K. Makinson , K. Daae , **I. Fer**, P.R. Holland, and K.W. Nicholls (2014). Hydrography and circulation in the Filchner Depression, Weddell Sea, Antarctica. *J. Geophys. Res.*, 119.
61. Guo, C, M. Ilicak, **I. Fer**, E. Darelius, and M. Bentsen (2014). Baroclinic instability of the Faroe Bank Channel Overflow. *J. Phys. Oceanogr.*, 10.1175/JPO-D-14-0080.1.
60. Peterson, A. K. and **I. Fer**, (2014). Dissipation measurements using temperature microstructure from an underwater glider. *Method. Oceanogr.*, 10, 44-69, 10.1016/j.mio.2014.05.002.
59. Vihma, T., and 16 co-authors incl. **I. Fer** (2014). Advances in understanding and parameterization of small-scale physical processes in the marine Arctic .... *Atmos. Chem. Phys.*, 14, 9403-9450.
58. **Fer, I.**, A. K. Peterson, and J. E. Ullgren (2014). Microstructure measurements from an underwater glider in the turbulent Faroe Bank Channel overflow. *J. Atmos. Ocean. Tech.*, 31, 1128-1150.
57. **Fer, I.** (2014). Near-inertial mixing in the central Arctic Ocean, *J. Phys. Oceanogr.* 44, 2031–2049, doi: 10.1175/JPO-D-13-0133.1.
56. Waterhouse, A. F., and 18 co-authors incl. **I. Fer** (2014). Global Patterns of Diapycnal Mixing from Measurements of the Turbulent Dissipation Rate. *J. Phys. Oceanogr.*, 44(7): 1854-1872.
55. Darelius, E., K. O. Strand, S. Østerhus, T. Gammelsrød, M. Årthun and **I. Fer** (2014). On the seasonal signal of the Filchner Overflow, ..., *J. Phys. Oceanogr.*, 44, 1230-1243.
54. Ullgren, J. E., **I. Fer**, E. Darelius, and N. Beaird (2014). Interaction of the Faroe Bank Channel overflow with Iceland Basin intermediate waters, *J. Geophys. Res.*, 119, 228-240.
53. Støylen, E., and **I. Fer** (2014), Tidally induced internal motion in an Arctic fjord, *Nonlinear Proc. Geophys.*, 21(1), 87-100, doi: 10.5194/npg-21-87-2014.
52. Bakhoday Paskyabi, M. and **I. Fer**, (2014). The influence of surface gravity waves on the injection of turbulence in the upper ocean, *Nonlin. Processes Geophys.*, 21, 713-733.
51. **Fer, I.**, and Bakhoday Paskyabi, M. (2014). Autonomous ocean turbulence measurements using shear probes on a moored instrument. *J. Atmos. Ocean. Tech.*, 31(2), 474-490.
50. **Fer, I.**, and K. Drinkwater (2014). Mixing in the Barents Sea Polar Front near Hopen in spring. *J. Mar. Sys.*, 130, 206-218, 10.1016/j.jmarsys.2012.01.005.
49. Dahlgren, T.G., M-L Schläppy, A. Shashkov, M. Andersson, Y. Rzhanov, and **I. Fer** (2014). Assessing impact from wind farms at subtidal, exposed marine areas. In: Marine Renewable Energy and Environ. Int., Humanity and the Sea, Eds. M. A. Shields and A.I. L. Payne, 39-48, Springer.
48. Christensen, K. H., J. Röhrs, B. Ward, **I. Fer**, G. Broström, Ø. Saetra, and Ø. Breivik (2013). Surface wave measurements using a ship-mounted ultrasonic altimeter, *Method. Oceanogr.*, 6, 1-15.
47. Bakhoday Paskyabi, M. and **I. Fer**, (2013). Turbulence measurements in shallow water from a subsurface moored moving platform. *Energy Procedia*, 35, 307-316.
46. Jensen, M.F., **I. Fer**, and E. Darelius (2013). Low-frequency variability on the continental slope of the southern Weddell Sea. *J. Geophys. Res.*, 118, doi:10.1002/jgrc.20309.
45. Guthrie, J., J. Morison, and **I. Fer**, (2013). Revisiting Internal Waves and Mixing in the Arctic Ocean. *J. Geophys. Res.*, 118, doi:10.1002/jgrc.20294.
44. Bakhoday Paskyabi, M. and **I. Fer**, (2013). Turbulence structure in the upper ocean: a comparative study of observations and modelling. *Ocean Dyn.*, 64, 611-631.
43. Darelius, E., J.E. Ullgren, and **I. Fer**, (2013). Observations of barotropic oscillations and their influence on mixing in the Faroe Bank Channel Overflow... . *J. Phys. Ocean.*, 43, 1525-1532.
42. Holbrook, W. S., **I. Fer**, R. W. Schmitt, et al. (2013). Estimating oceanic turbulence dissipation from seismic images. *J. Atm. Ocean. Tech.*, 30, 1767-1788.