

Céline Heuzé's CV

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PERSONAL INFORMATION

Date of birth: 01 March 1988

Nationality: French

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Céline Heuzé is a Marie Curie research fellow in physical oceanography at the University of Gothenburg, Sweden, with 6 years of experience in polar climatology. She obtained her PhD in 2015 from the University of East Anglia, UK, in collaboration with the UK Met Office. Her research focusses on the transport of heat by global deep waters and their interaction with the rest of the climate system at high latitudes, using global climate modelling, in-situ hydrographic data, and remote sensing. She participated in four Antarctic and Arctic field campaigns, two as PI of the physical oceanography group. She is a member of the Northern Oceans Regional Panel (NORP) sponsored by CLIVAR/CliC, and an associate editor for the Journal of Physical Oceanography. Dr. Heuzé has had 1 BSc, 3 MSc and 2 PhD students under her supervision.

EDUCATION

- 2015 PhD “Antarctic Bottom Water in CMIP5 models: characteristics, formation, evolution”
School of Environmental Sciences, University of East Anglia (UEA), United Kingdom
and UK Met Office Hadley Centre, United Kingdom.
Supervisors: Profs Karen Heywood and David Stevens, and Dr. Jeff Ridley
I assessed biases in state-of-the-art global climate model Southern Ocean’s representation,
how to fix those biases, and their effect on climate change projections of global sea level rise.
- 2011 Master/Engineering degree “Analysis of Southern Ocean mixed layer interannual variability”
Hydrodynamics and Ocean Engineering, Ecole Centrale de Nantes, France
and Physical Oceanography, LOCEAN Université Pierre et Marie Curie, France.

CURRENT POSITIONS

- 2015 – VINNMER Marie Curie Cofund, Incoming research fellow, VINNOVA, Sweden
“Is Greenland meltwater going to stop the Atlantic overturning circulation?”
Department of Marine Sciences, University of Gothenburg, Sweden; in collaboration with
Department of Earth Sciences, University of Oxford, United Kingdom.
- 2018 – Associate Editor, Journal of Physical Oceanography.

PREVIOUS POSITIONS

- 2015 – 2017 Consultant in ocean remote sensing; Department of Space, Earth and Environment,
Chalmers University of Technology, Sweden.
- 2017 Executive secretary of Sweden’s national committee of the international Association of Polar
Early Career Scientists ([APECS](#)).
- 2015 – 2015 Post-doctoral researcher; LOCEAN, Université Pierre et Marie Curie, France.
- 2011 – 2011 Research assistant; LOCEAN, Université Pierre et Marie Curie, France.
- 2010 – 2010 Research assistant; Centre Eau, Terre et Environnement, INRS, Canada.

FELLOWSHIPS

- 2011 – 2015 NERC-CASE industrial PhD fellowship, School of Environmental Sciences, University of
East Anglia, United Kingdom, and UK Met Office Hadley Centre, United Kingdom.

SUPERVISION OF GRADUATE STUDENTS

- 2016 – **PhD student** W. Aldenhoff, Chalmers University of Technology; assistant supervisor.
- 2018 – **PhD student** M. Mohrmann, Department of Marine Sciences, University of Gothenburg;
assistant supervisor.
- 2015 – **In total 3 master’s and 1 bachelor’s students**

TEACHING ACTIVITIES

- 2017 – Lecturer and course material creator – Marine models and databases (First cycle, in Swedish), University of Gothenburg, Sweden.
- 2016 – Lecturer and course material creator – Ocean mixing (Second cycle, in English), University of Gothenburg, Sweden.
- 2015 – 2015 Teaching assistant – Environmental chemistry (First cycle), UEA, United Kingdom.
- 2013 – 2015 Teaching assistant – Atmosphere and Oceans (First cycle), UEA, United Kingdom.
- 2012 – 2014 Teaching assistant – Maths for scientists (First cycle), UEA, United Kingdom.
- 2011 – 2012 Teaching assistant – Forces of Nature (First cycle), UEA, United Kingdom.

FIELDWORK EXPERIENCE

- 2017 Physical Oceanography PI, *R/V Polarstern*, Alfred Wegener Institute, Arctic.
- 2015 *I/B Oden*, Swedish Polar Research Secretariat, Nares Strait north-west Greenland.
- 2013 *R/V Lance*, Norwegian Polar Institute, Fram Strait.
- 2012 Physical Oceanography PI, *RRS James Clark Ross*, British Antarctic Survey, Weddell Sea.
- 2011 *Thétys II*, CNRS, Western Mediterranean Sea.

FUNDED RESEARCH GRANTS

- 2015 – 2018 **VINNOVA, VINNMER Marie Curie Cofund** Incoming research fellowship 'Is Greenland meltwater going to stop the Atlantic overturning circulation?', PI, 2.3 MSEK
- 2018 **UGOT climate fund**, 0.6 MSEK for developing sensors, CI (PI Sebastiaan Swart)
- 2017 **UGOT climate fund**, 0.8 MSEK for developing sensors, CI (PI Anna Wählin)
- 2016 – 2017 **Stiftelse Olle Engkvist Byggmästare** 'Initiating PANDORAS: the Pan-Arctic Network of Deep Ocean Remote and Autonomous Sensors', PI, 0.3 MSEK

ORGANISATION OF SCIENTIFIC MEETINGS

- 2018 Organiser of and lecturer at the short interactive course "What are the key problems in Climate Science?" during European Geophysical Union general assembly (EGU, 10 000 participants); max. 50 students can be accepted.
- 2018 Convenor of session "North Atlantic – Nordic seas – Arctic Ocean heat exchanges: Processes and Impacts", Ocean Sciences meeting (15 000 participants), 25 presentations accepted.
- 2017 Organiser and lecturer, EGU short course "Communicating climate change", 50 students.
- 2016 – Main organiser of the annual Gothenburg Polar Conference, 30 participants, Sweden.
- 2016 Main organiser of 30th international Forum for Research into Ice-Shelf Processes, 90 participants, Sweden.

INSTITUTIONAL RESPONSIBILITIES

- 2015 – Early-career representative as local contact for the Association of Polar Early Career Scientists, University of Gothenburg, Sweden.
- 2015 – 2017 Organiser of the monthly Marine lunch series between Chalmers University of Technology and the University of Gothenburg, average 20 participants, Sweden.
- 2013 – 2015 Founder and manager of the early career writing group, 20 members, School of Environmental Sciences, University of East Anglia, United Kingdom

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2017 – Co-lead, CliC (Climate and Cryosphere) and CLIVAR (Climate and Ocean: Variability, Predictability and Change) [Northern Oceans Regional Panel](#). I am in charge of coordinating the task "Understanding of the role of the Arctic Ocean in Arctic amplification".
- 2016 – Regular author, Cryosphere Division, European Geophysical Union [blog](#).

AWARDS AND PRIZES

- 2017 European Geophysical Union best blog award
- 2016 Wallenberg foundation travel award for young researchers
- 2015 Forum for Arctic Modelling and Observation Systems travel award
- 2013 & 2015 Gordon Research Conference student travel award
- 2014 Challenger Society student travel award

- 2014 Graduate Climate Conference student travel award
2014 American Geophysical Union student travel award

FULL LIST OF PUBLICATIONS

12 peer-reviewed articles and 2 monographs; 131 citations; H-index: 5 (Google Scholar, 5 Feb. 2018)
The publications written without the candidate's direct supervisor are marked with an asterisk *.

Monographs

C. Heuzé (2015) Antarctic Bottom Water in CMIP5 models: characteristics, formation, evolution, *PhD thesis, University of East Anglia*.

C. Heuzé (2011) Analyse de la variabilité interannuelle de la couche de mélange de l'Océan Austral / Analysis of Southern Ocean mixed layer interannual variability, *Master thesis, LOCEAN Université Pierre et Marie Curie and Ecole Centrale de Nantes*.

Peer reviewed articles

* W. Aldenhoff, **C. Heuzé** and L.E.B. Eriksson (2018), Comparison of ice/water classification in Fram Strait from C- and L-band SAR imagery, *Ann. Glaciol.* Accepted 2 Feb. 2018.

* **C. Heuzé**, G.K. Carvajal and L.E.B. Eriksson (2017), Optimisation of sea surface current retrieval using a maximum cross correlation technique on modelled sea surface temperature, *Journal of Atmospheric and Oceanic Technology* **34** 2245–2255.

* **C. Heuzé** (2017), North Atlantic deep water formation and AMOC in CMIP5 models, *Ocean Science* **13** 609-622.

* **C. Heuzé**, G.K. Carvajal, L.E.B. Eriksson and M. Soja-Woźniak (2017), Sea Surface Currents Estimated from Spaceborne Infrared Images Validated against Reanalysis Data and Drifters in the Mediterranean Sea, *Remote Sensing* **9** 422

C. Heuzé, A. Wåhlin, H.L. Johnson and A. Münchow (2017), Pathways of meltwater export from Petermann Glacier, Greenland, *Journal of Physical Oceanography* **47**, 405-418.

* M. Reeve, **C. Heuzé**, et al. (2016), Improving together: better science writing through peer learning, *Hydrology and Earth System Sciences* **20**, 2965-2973.

* G.K. Carvajal, M. Wozniak, **C. Heuzé**, et al. (2016): Assessment of satellite and ground-based estimates of surface currents, *Geoscience and Remote Sensing Symposium (IGARSS), 2016 IEEE International*, 4675-4678.

* **C. Heuzé**, F. Vivier, J. Le Sommer, J.-M. Molines and T. Penduff (2015), Can we map the interannual variability of the whole upper Southern Ocean with the current database of hydrographic data?, *Journal of Geophysical Research Oceans* **120**, 7960-7978.

C. Heuzé, K.J. Heywood, D.P. Stevens and J.K. Ridley (2015), Changes in global ocean bottom properties and volume transports in CMIP5 models under climate change scenarios, *Journal of Climate* **28**, 2917–2944.

C. Heuzé, J. Ridley, D. Calvert, D. Stevens and K. Heywood (2015), Increasing vertical mixing to reduce Southern Ocean deep convection in NEMO3.4, *Geoscientific Model Development* **8**, 3119-3130.

K.J. Heywood, S. Schmitdtko, **C. Heuzé**, et al. (2014), Ocean processes at the Antarctic continental slope, *Philosophical Transactions of the Royal Society A* **372**, 20130047.

C. Heuzé, K.J. Heywood, D.P. Stevens and J.K. Ridley (2013), Southern Ocean Bottom Water Characteristics in CMIP5 models, *Geophysical Research Letters* **40**, 1409-1414.

Other

Popular scientific articles/presentations: 31 (11 for the [EGU](#), 6 for [SciSnack](#), 14 for [Polarfever](#))

Updated CV, list of publications and conference presentations, are available at

<http://cheuze.com>