

# Curriculum Vitae

## Personal Information

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**Name** Sandra-Esther Brunnabend  
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**Date of birth** 04. September 1979  
**Citizenship** German

## Work Experience

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**01 December-today** Researcher in the Oceanography unit, Department of Research and Development, Swedish Meteorological and Hydrological Institute, Norrköping, Sweden

**01 September 2019-30 November 2019** Postdoc position in the Oceanography unit, Department of Research and Development, Swedish Meteorological and Hydrological Institute, Norrköping, Sweden, topic: Oceanography with focus on regional high resolution modeling at the Swedish west coast

**01 October 2016-31 August 2019** Research associate/scientific programmer at the Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research, Warnemünde, Germany, topics: (1) technical coupling of the different components in regional climate systems and (2) water exchange between the Danish Straits with global mean sea level rise

**01 March 2015-31 September 2016** Postdoc position at the Institute of Geodesy and Geoinformation (APMG), University of Bonn, Germany, topic: sea level reconstruction using satellite altimetry, tide gauge records and ocean modeling within project SEALTIDE (ESA Living Planet Fellowship 2014)

**01 October 2012-28 February 2015** Postdoc position at the Institute for Marine and Atmospheric Research Utrecht (IMAU), Utrecht University, The Netherlands, topic: simulation of future sea level changes in the North Atlantic due to ocean circulation changes within the project eSALSA (An eScience Approach to determine future local sea-level changes)

**17 February 2011-30 September 2012** Postdoc position at the Section of Climate Dynamics, Alfred-Wegener-Institute Helmholtz-Center for Polar- and Marine Research in Bremerhaven, Germany, topic: investigation of oceanic responses to melting scenarios by means of ocean modeling within the project FIGO (Fingerprints of ice melting in

<b>01 October 2007- 17 February 2011</b>	geodetic GRACE and ocean modelling; SPP 1257) Doctoral candidate (natural sciences), Alfred-Wegener-Institute Helmholtz-Center for Polar- and Marine Research in Bremerhaven, Germany, topic: simulation of ocean mass variations within the project JIGOG (Surface mass redistribution from joint inversion of GPS site displacements, ocean bottom pressure (OBP) models, and GRACE global gravity models; SPP 1257)
<b>01 February 2005-31 July 2005</b>	EADS Astrium GmbH, Friedrichshafen, Germany 2 <sup>nd</sup> practical semester, topic: Model based software development using Matlab/Simulink and Real Time Workshop
<b>01 September 2003- 31 January 2004</b>	Queensland University of Technology, Brisbane, Australia, 1 <sup>st</sup> practical semester, topic: Development of a geographical information system in Java

## Education

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<b>October 2007-February 2011</b>	Dr. rer. nat. (natural sciences), Alfred-Wegener-Institute Helmholtz-Center for Polar- and Marine Research in Bremerhaven and University of Bremen, Germany, thesis title: Sea level variations derived from mass conserving finite element sea-ice ocean model (FESOM), <a href="http://d-nb.info/1011002337/34">http://d-nb.info/1011002337/34</a> Thesis submitted: 02 Dec 2010; Defense: 17 Feb 2011
<b>October 2005-September 2007</b>	Master of Science, ESPACE (Earth Oriented Space Science and Technology; <a href="http://www.espace-tum.de">www.espace-tum.de</a> ) Technical University of Munich, Germany
<b>September 2001-July 2005</b>	Diplom-Informatikerin / FH (Computer Science) University of Applied Sciences Braunschweig/Wolfenbuettel, Germany

## Technical Skills

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- software development and engineering using FORTRAN
- scientific programming on parallel supercomputers at NSC, DKRZ, HLRN, and SURFsara
- modifying and running ocean models (NEMO, FESOM, POP, MOM-5, GETM)
- technical coupling of MOM-5 and COSMO-CLM using OASIS3-MCT
- analysis and visualization of large data sets using Python, R, MATLAB, and Octave
- analysis of various satellite and in-situ data sets, for example satellite gravimeter (GRACE), satellite altimeter (Topex/Poseidon, Jason 1/2, ERS 1/2, ...), and tide gauge measurements
- analysis atmospheric and oceanic reanalysis products (for example NCAR/NCEP, GPCP, and ERA-Interim)

## Additional Information

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<b>Language skills</b>	English (fluent) German (native language)
<b>Reviewer</b>	Journal of Geodesy, Ocean Science, and Geophysical Research Letters, National Science Foundation (NSF, 2016), Journal of Climate, Ocean Modelling, National Environment Research Council (NERC), Journal of Atmospheric and Oceanic Technology
<b>Proposals</b>	Computational Resources at HLRN in Berlin (2017: 327 kNPL; 2018: 192 kNPL)  GROCE (GReenland ice sheet / OCEan Interaction; Co-Pi in TP10; 2016)  Living Planet Postdoctoral Fellowship (PI; 2014)  Computational Resources at DKRZ Hamburg (2012: 684.173 CPUh)
<b>Expedition</b>	Polarstern Cruise ANTXXVI-3 Participation in the project "Variability and West Antarctic ice shelf melting on the Amundsen" (CTD measurements)

Norrköping, 20 April 2020