

# Curriculum Vitae

## Gunnar Voet

Scripps Institution of Oceanography  
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### I. Personal Details:

*Citizenship:* Germany

*US immigration status:* Permanent Resident

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### II. Education:

- 2010                      PhD in Physical Oceanography, University of Hamburg.  
                                 Thesis: *On the Nordic Overturning Circulation.*
- 2006                      Diplom Physik (similar to Msc. Physics), University of Hamburg.  
                                 Thesis: *Entrainment in the Denmark Strait Overflow Plume by meso-scale Eddies.*

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### III. Appointments held:

- 2014 – ongoing        Assistant Project Scientist at the Scripps Institution of Oceanography,  
                                 University of California, San Diego.
- 2012 – 2014            Postdoctoral Researcher at the Applied Physics Laboratory, University of Washington.
- 2011                      Research associate at the German Federal Maritime and Hydrographic Agency.
- 2010 – 2011            Software development at the German Federal Waterways Engineering and Research Institute.
- 2006 – 2010            Research associate at the Institute of Oceanography, University of Hamburg.

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### IV. External Funding:

- 2019-2020            **G. Voet.** Moored Oceanographic Instrumentation for Studies of Ocean Dynamics and Turbulence. Office of Naval Research, \$616,173.
- 2018-2022            Ferrari, R., K. L. Polzin, M. H. Alford, **G. Voet.** Collaborative Research: Bottom Boundary Layer Turbulence and the Ocean's Meridional Overturning Circulation. *National Science Foundation*. \$1,922,734.
- 2018-2023            Waterhouse, A., **G. Voet.** Near-Inertial Shear and Kinetic Energy in the North Atlantic experiment. *Office of Naval Research*, \$942,479.
- 2017-2020            **Voet, G.,** M. H. Alford, L. J. Pratt, J. B. Girton, G. S. Carter. Collaborative Research: Hydraulic Processes in the Samoan Passage. *National Science Foundation*, \$714,202.
- 2015-2019            Alford, M. H., J. A. MacKinnon, **G. Voet.** Flow Encountering Abrupt Topography. *Office of Naval Research*, \$1,394,842.

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**V. Refereed Publications:**

- in preparation      **Voet, G.**, M. H. Alford, J. B. Girton, G. S. Carter, J. M. Klymak, A. M. Thurnherr, L. J. Pratt. Energetics of a Samoan Passage Dense Overflow. *Journal of Physical Oceanography*.
- submitted          **Voet, G.**, M. H. Alford, J. A. MacKinnon, J. Nash. Observations of Lee Waves Generated by Topographic Form Drag on Tides and Low-Frequency Flow over a Tall Submarine Ridge near Palau. *Journal of Physical Oceanography*.
- submitted          Girton, J. B., J. B. Mickett, Z. Zhao, M. H. Alford, **G. Voet**, J. Cusack, G. Carter, K. A. Pearson-Potts, L. J. Pratt, S. Tan, J. M. Klymak. Flow-topography interactions in the Samoan Passage. *TOS Oceanography*.
- submitted          Siegelman, M., M. A. Merrifield, E. Firing, J. A. MacKinnon, M. H. Alford, **G. Voet**, H. W. Wijesekera, T. Schramek, E. Terrill. Observations of near-inertial surface currents at Palau. *TOS Oceanography*.
- submitted          Lele, R., S. G. Purkey, J. D. Nash, A. M. Thurnherr, C. B. Whalen, L. D. Talley, J. A. MacKinnon, **G. Voet**, S. Mecking. Abyssal Mixing in the South West Pacific Basin. *Journal of Physical Oceanography*.
- submitted          Luecke, C., B. Arbic, J. Richman, J. Shriver, M. Alford, J. Ansong, S. Bassette, M. Buijsman, D. Menemenlis, R. Scott, P. Timko, **G. Voet**, A. Wallcraft, L. Zamudio. From Internal Gravity Waves to the Mesoscale: Temperature Variance and Kinetic Energy in Models and Historical Observations. *Journal of Geophysical Research: Oceans*.
- accepted          Rudnick, D. L., K. L. Zeiden, C. Ou, T. M. S. Johnston, J. A. MacKinnon, M. H. Alford, **G. Voet**. Understanding vorticity caused by flow passing an island. *TOS Oceanography*.
- accepted          Carter, G. C., **G. Voet**, M. H. Alford, J. B. Girton, J. B. Mickett, J. M. Klymak, L. J. Pratt, K. A. Pearson-Potts, J. M. Cusack, S. Tan. A spatial geography of abyssal turbulent mixing in the Samoan Passage. *TOS Oceanography*.
- accepted          Andres, M., M. Siegelman, V. Hormann, R. Musgrave, M. Merrifield, D. Rudnick, H. Wijesekera, L. Centurioni, M. Alford, **G. Voet**, J. MacKinnon, J. Nash. Eddies, Topography, and the Abyssal Flow by the Kyushu-Palau Ridge near Velasco Reef. *TOS Oceanography*.
- 2019                Cusack, J. M., **G. Voet**, M. H. Alford, J. B. Girton, G. S. Carter, L. J. Pratt, K. Pearson-Potts, S. Tan. Persistent Turbulence in the Samoan Passage. *Journal of Physical Oceanography*.
- 2019                MacKinnon, J. A., M. H. Alford, **G. Voet**, K. Fitzmorris, T. M. S. Johnston, M. Siegelman, S. Merrifield, M. Merrifield. Eddy wake generation from broadband currents near Palau. *Journal of Geophysical Research: Oceans*.
- 2019                Pratt, L. J., **G. Voet**, A. Pacini, S. Tan, M. H. Alford, G. S. Carter, J. B. Girton, D. Menemenlis. Pacific abyssal transport and mixing: through the Samoan Passage vs. around the Manihiki Plateau. *Journal of Physical Oceanography* 49(6), 1577-1592.
- 2019                Wagner, G. L., G. Flierl, R. Ferrari, **G. Voet**, G. S. Carter, M. H. Alford, J. B. Girton. Squeeze Dispersion and the Effective Diapycnal Diffusivity of Oceanic Tracers. *Geophysical Research Letters*, 46, 5378-5386.
- 2018                Thorpe, S. A., J. Malarkey, **G. Voet**, M. H. Alford, J. B. Girton, G. S. Carter. Application of a model of internal hydraulic jumps. *Journal of Fluid Mechanics*, 834, 125-148.
- 2017                Savage, A. C., B. K. Arbic, M. H. Alford, J. K. Ansong, J. T. Farrar, D. Menemenlis, A. K. O'Rourke, J. G. Richman, J. F. Shriver, **G. Voet**, A. J. Wallcraft, L. Zamudio. Spectral decomposition of internal gravity wave sea surface height in global models. *Journal of Geophysical Research*, 122(10), 7803-7821.
- 2017                Savage, A. C., B. K. Arbic, J. G. Richman, J. F. Shriver, M. H. Alford, M. C. Buijsman, J. T. Farrar, H. Sharma, **G. Voet**, A. J. Wallcraft, L. Zamudio. Frequency content of sea surface height variability from internal gravity waves to mesoscale eddies. *Journal of Geophysical Research*, 122(3), 2519-2538.
- 2016                **Voet, G.**, J. B. Girton, M. H. Alford, G. S. Carter, J. M. Klymak, J. B. Mickett. Warming and

- weakening of the abyssal flow through Samoan Passage. *Journal of Physical Oceanography*, 46(8), 2389-2401.
- 2015 **Voet, G.**, M. H. Alford, J. B. Girton, G. S. Carter, J. B. Mickett, J. M. Klymak. Pathways, Volume Transport and Mixing of Abyssal Water in the Samoan Passage. *Journal of Physical Oceanography*, 45(2), 562-588.
- 2013 Alford, M. H., J. B. Girton, **G. Voet**, G. S. Carter, J. B. Mickett and J. M. Klymak. Turbulent mixing and hydraulic control of abyssal water in the Samoan Passage. *Geophysical Research Letters*, 40, 1-7.
- 2010 **Voet, G.** and D. Quadfasel. Entrainment in the Denmark Strait overflow plume by meso-scale eddies. *Ocean Science*, 6, 301-310.
- 2010 **Voet, G.**, D. Quadfasel, K.-A. Mork and H. Søyland. The mid-depth circulation of the Nordic Seas derived from profiling float observations. *Tellus A*, 62.
- 2010 Fer, I., **G. Voet**, K. Seim, B. Rudels and K. Latarius. Intense mixing of the Faroe Bank Channel overflow. *Geophysical Research Letters*, 37, L02604.
- 2008 Dickson, B., S. Dye, S. Jónsson, A. Köhl, A. Macrander, M. Marnela, J. Meincke, S. Olsen, B. Rudels, H. Valdimarsson and **G. Voet**. The Overflow Flux West of Iceland: Variability, Origins and Forcing. In: *Arctic-Subarctic Ocean Fluxes*, edited by R.R. Dickson et al., Springer, 443-474.

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## VI. Talks and posters at international conferences:

- 2019 27<sup>th</sup> IUGG General Assembly  
*Observations of Low Frequency Flow-Generated Oceanic Lee Waves and Associated Turbulent Dissipation Over a Tall Ridge (oral presentation)*. Montréal, Québec, Canada.
- 2018 Gordon Research Conference on Ocean Mixing  
*Lee wave observations over a tall ridge (poster)*. Andover, New Hampshire, USA.
- 2017 49<sup>th</sup> Internal Liège Colloquium & 8<sup>th</sup> Warnemünde Turbulence Days.  
*Abyssal Turbulent Mixing in the Samoan Passage (oral presentation)*. Liège, Belgium.
- 2016 Ocean Sciences Meeting.  
*Observed energy and momentum budget of a hydraulically controlled dense overflow in the Samoan Passage (oral presentation)*. New Orleans, Louisiana, USA.
- 2015 26<sup>th</sup> IUGG General Assembly.  
*Abyssal volume and heat transport through the Samoan Passage: A 16-month timeseries based on recent observations*. Prague, Czech Republic.
- 2014 Ocean Sciences Meeting.  
*Volume Transports and Turbulent Mixing in the Samoan Passage (poster)*. Honolulu, Hawaii, USA.
- 2012 AGU Fall Meeting.  
*The Samoan Passage Abyssal Mixing Experiment (oral presentation)*. San Francisco, California, USA.
- 2010 Euro-Argo User Workshop, *Argo Floats in the Nordic Seas (oral presentation)*. Paris, France.
- 2009 MOCA-09 Joint Assembly, *The overflow across the Iceland-Faroe Ridge (poster)*. Montréal, Québec, Canada.
- 2008 Ocean Sciences Meeting, *The mid-depth circulation of the Nordic Seas from profiling floats (oral presentation)*. Orlando, Florida, USA.
- 2007 North Atlantic Subpolar Gyre Workshop, *Stirring and mixing in the Nordic overflow plumes (poster)*. Kiel, Germany.
- 2006 Rapid Climate Change International Science Conference, *Stirring and mixing in the Nordic overflow plumes (poster)*. Birmingham, UK.

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**VII. Major Research Cruises:**

2019	Research cruise SP1924 on <i>R/V Robert Gordon Sproul</i> . San Diego Trough. Chief Scientist. Mooring work.
2019	Research cruise SR1914 on <i>R/V Sally Ride</i> . Tropical Pacific north of Palau. Chief Scientist. Mooring work, microstructure measurements, CTD.
2019	Research cruise SP1917 on <i>R/V Robert Gordon Sproul</i> . San Diego Trough. Chief Scientist. Mooring work.
2019	Research cruise AR35-02 on <i>R/V Neil Armstrong</i> . Iceland Basin. Chief Scientist. Mooring work, CTD.
2018	Research cruise TN357 on <i>R/V Thomas G. Thompson</i> . Tropical Pacific north of Palau. Mooring work, chameleon (vertical microstructure profiler).
2017	Research cruise OC1710A on <i>R/V Oceanus</i> . Central Californian Coastal Waters. Mooring work.
2017	Research cruise RR17078 on <i>R/V Roger Revelle</i> . Tropical Pacific north of Palau. Chief Scientist. CTD, LADCP, mooring work.
2016	Research cruise RR1607 on <i>R/V Roger Revelle</i> . Tropical Pacific north of Palau. Co-PI. SWIMS, fastCTD, MMP, CTD, LADCP, mooring work.
2015	Research cruise SKQ201511S on <i>R/V Sikuliaq</i> . Beaufort Sea & Bering Strait. SWIMS, MMP, CTD, LADCP, mooring work.
2015	Research cruises RR1501 & RR1503 on <i>R/V Roger Revelle</i> . Tasman Sea. CTD, LADCP and mooring work.
2014	Research cruise PS1415 on <i>R/V Point Sur</i> . Monterey Bay. Biosonics echosounder & CTD.
2014	Research cruise OC1408B on <i>R/V Oceanus</i> . Washington Shelf. SWIMS, MMP and mooring work.
2014	Research cruise TN305 on <i>R/V Thomas G. Thompson</i> . Samoan Passage. CTD, LADCP, VMP and mooring work.
2013	Research cruise MV1306 on <i>R/V Melville</i> . CLIVAR/Carbon P02E (Honolulu - San Diego). Co-Chief Scientist.
2012	Research cruise RR1209 on <i>R/V Roger Revelle</i> . Samoan Passage. CTD, LADCP, VMP and mooring work.
2008	Research cruise HM610 on <i>Håkon Mosby</i> . Faroe-Bank Channel. CTD, LADCP, VMP (vertical microstructure profiler).
2007	Research cruise MSM05-4 on <i>MS Merian</i> . Irminger Sea / Denmark Strait. CTD, LADCP and mooring work.
2006	Research cruise D311 on <i>RRS Discovery</i> . Irminger Sea / Denmark Strait. CTD, vmADCP and mooring work.
2005	Research cruise A0805 on <i>Árni Friðriksson</i> . Irminger Sea / Denmark Strait. CTD and mooring work.
2002	Research cruise 44/02/05 on <i>FS Alexander von Humboldt</i> . North Atlantic. CTD.

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**VIII. Professional Services:**

Peer-review of scientific publications in *Journal of Physical Oceanography*, *Journal of Geophysical Research*, *Ocean Modelling*, *Ocean Science*, *Deep Sea Research*, *Journal of Marine Research*, *Journal of Marine Systems*, *Oceanography*, *Marine Geodesy*, *Chinese Journal of Oceanology and Limnology*, *Science Bulletin*.

Peer-review of research proposals for NSF and NOAA.

Member of *American Geophysical Union*.

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**IX. Stipends and Awards:**

2007                      Awarded with the *Annette-Barthelt-Preis für Meeresforschung* for an outstanding thesis in the field of seagoing ocean research, including a research grant from the German Federal Ministry of Education and Research (BMBF).

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**X. Other qualifications:**

2014                      UNOLS Chief Scientist Training Workshop

2013                      Co-Chief Scientist CLIVAR/Carbon P02E.

2008                      3<sup>rd</sup> EGO Workshop and “Glider School”, NATO Undersea Research Centre, La Spezia, Italy.

2007                      CKO International Summer School on Physical Oceanography, Les Diablerets, Switzerland.  
Organized by the *Netherlands Centre for Climate Research*.