

Curriculum Vitae

Gunnar Voet

Scripps Institution of Oceanography
University of California, San Diego
9500 Gilman Drive #0213
La Jolla, CA 92093-0213

email: gvoet@ucsd.edu
phone: 858.822.6809
web: gunnarvoet.github.io

I. Personal Details:

Citizenship: Germany

US immigration status: Permanent Resident

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.*

III. Appointments:

- 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.

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.

V. Refereed Publications:

- in preparation **Voet, G.**, M. H. Alford, J. B. Girton, G. S. Carter, J. M. Cusack, J. M. Klymak, A. M. Thurnherr, L. J. Pratt. Energetics of a Samoan Passage Dense Overflow. *Journal of Physical Oceanography*.
- submitted Hamann, M. M., Alford, M. H., Lucas, A. J., Waterhouse, A., **Voet, G.** Reflected internal tides in a shelf-incising submarine canyon: dynamics, turbulence, and context. *Journal of Physical 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*.
- 2020 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*, 125(5), .
- 2020 **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* 50(5), 1489-1507.
- 2019 Johnston, S. T. M., M. C. Schönau, T. Paluskiewicz, J. A. MacKinnon, B. K. Arbic, P. L. Colin, M. H. Alford, M. Andres, L. Centurioni, K. R. Helfrich, V. Hormann, P. F. J. Lermusiaux, R. C. Musgrave, B. S. Powell, B. Qiu, D. L. Rudnick, H. L. Simmons, L. St. Laurent, D. S. Trossman, **G. Voet**, H. W. Wijesekera, K. Zeiden. An Introduction and Highlights from Flow Encountering Abrupt Topography (FLEAT): A Multi-Scale Observational and Modelling Program to Understand the Effects of Topographic Flow in the Western North Pacific. *TOS Oceanography* 32(4), 10-21.
- 2019 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* 32(4), 74-83.
- 2019 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* 32(4), 184-193.
- 2019 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* 32(4), 66-73.
- 2019 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* 32(4), 194-203.
- 2019 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* 32(4), 46-55.
- 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* 49(12), 3179-3197.
- 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* 124, 4891-4903.
- 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. Søiland. 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.

VI. Talks and Posters at International Conferences:

- 2020 Ocean Sciences Meeting.
Observations of Lee Waves Generated by Topographic Form Drag on Tides and Low-Frequency Flow over a Tall Submarine Ridge near Palau (oral presentation). San Diego, California, USA.
- 2019 9th Warnemünde Turbulence Days.
Observations of large internal waves and strong turbulence over deep submarine ridges in the Western North Pacific (oral presentation). Vilm, Germany.
- 2019 27th 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 49th Internal Liège Colloquium & 8th 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 26th 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.

VII. Major Research Cruises:

- 2019 Research cruise SP1924 on *R/V Robert Gordon Sproul*. San Diego Trough.
Chief Scientist. Mooring work.
- 2019 Research cruise SR1914 on *R/V Sally Ride*. Tropical Pacific north of Palau.
Chief Scientist. Mooring work, microstructure measurements, CTD.
- 2019 Research cruise SP1917 on *R/V Robert Gordon Sproul*. San Diego Trough.
Chief Scientist. Mooring work.
- 2019 Research cruise AR35-02 on *R/V Neil Armstrong*. Iceland Basin.
Chief Scientist. Mooring work, CTD.
- 2018 Research cruise TN357 on *R/V Thomas G. Thompson*. Tropical Pacific north of Palau.
Mooring work, chameleon (vertical microstructure profiler).
- 2017 Research cruise OC1710A on *R/V Oceanus*. Central Californian Coastal Waters.
Mooring work.
- 2017 Research cruise RR17078 on *R/V Roger Revelle*. Tropical Pacific north of Palau.
Chief Scientist. CTD, LADCP, mooring work.
- 2016 Research cruise RR1607 on *R/V Roger Revelle*. Tropical Pacific north of Palau.
Co-PI. SWIMS, fastCTD, MMP, CTD, LADCP, mooring work.
- 2015 Research cruise SKQ201511S on *R/V Sikuliaq*. Beaufort Sea & Bering Strait.
SWIMS, MMP, CTD, LADCP, mooring work.
- 2015 Research cruises RR1501 & RR1503 on *R/V Roger Revelle*. Tasman Sea.
CTD, LADCP and mooring work.
- 2014 Research cruise PS1415 on *R/V Point Sur*. Monterey Bay.
Biosonics echosounder & CTD.
- 2014 Research cruise OC1408B on *R/V Oceanus*. 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. |

VIII. Professional Services:

Peer-review of scientific publications in *Journal of Physical Oceanography*, *Journal of Geophysical Research*, *Geophysical Research Letters*, *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*.

IX. Stipends and Awards:

| | |
|------|---|
| 2007 | Awarded with the <i>Annette-Barthelt-Preis für Meeresforschung</i> 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). |
|------|---|

X. Other Qualifications:

| | |
|------|--|
| 2014 | UNOLS Chief Scientist Training Workshop |
| 2013 | Co-Chief Scientist CLIVAR/Carbon P02E. |
| 2008 | 3 rd 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 <i>Netherlands Centre for Climate Research</i> . |