

Jesse Cusack

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Education

2013 – 2018	Ph.D. Ocean and Earth Science, University of Southampton , UK Thesis: Mechanisms of Eddy Dissipation in the Southern Ocean Advisors: Alberto Naveira Garabato, David Smeed and James Girton
2012 – 2013	MSc Atmosphere, Oceans and Climate, University of Reading , UK
2008 – 2012	MPhys Physics, University of Manchester , UK

Research Experience

2018 – Ongoing	Postdoctoral researcher at Scripps Institution of Oceanography, University of California San Diego, USA Advisors: Gunnar Voet and Matthew Alford
2013 – 2018	Postgraduate researcher at the National Oceanography Centre Southampton, University of Southampton, UK
2015	Exchange student researcher at Woods Hole Oceanographic Institute, USA
2011	Undergraduate summer researcher at Imperial College, London, UK
2010	Undergraduate summer researcher at the University of Manchester, UK

Teaching Experience

2014	Teaching Assistant, University of Southampton <ul style="list-style-type: none">• Introduction to physical oceanography• Ocean observing measurements and data• Computational data analysis for geophysicists and ocean scientists
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Peer Reviewed Publications

- **Cusack, J. M.**, Brearley, J. A., Naveira Garabato, A. C., Smeed, D. A., Polzin, K. L., Velzeboer, N., Shakespeare, C. J. (2020) Observed eddy-internal wave interactions in the Southern Ocean. *Journal of Physical Oceanography*. *In Press*.
- Girton, J. B., Mickett, J. B., Zhao, Z., Alford, M. H., Voet, G., **Cusack, J. M.**, Carter, G., Pearson-potts, K. A., Pratt, L. J., Tan, S., Klymak, J. M. (2019) Flow-topography interactions in the Samoan Passage. *Oceanography*. 32(4), 184–193.
- Carter, G. S., Voet, G., Alford, M. H., Girton, J. B., Mickett, J. B., Klymak, J. M., Pratt, L. J., Pearson-Potts K. A., **Cusack, J. M.** & Tan, S. (2019) A spatial geography of abyssal turbulent mixing in the Samoan Passage. *Oceanography*. 32(4), 194–203.
- **Cusack, J. M.**, Voet, G., Alford, M. H., Girton, J. B., Carter, G. S., Pratt, L. J., Pearson-Potts K. A. & Tan, S. (2019) Persistent Turbulence in the Samoan Passage. *Journal of Physical Oceanography*. 49(12), 3179–3197.
- **Cusack, J. M.**, Naveira Garabato, A. C., Smeed, D. A., & Girton, J. B. (2017). Observation of a Large Lee Wave in the Drake Passage. *Journal of Physical Oceanography*, 47(4), 793–810.
- Göncü, F., Willshaw, S., Shim, J., **Cusack, J.**, Luding, S., Mullin, T., & Bertoldi, K. (2011). Deformation induced pattern transformation in a soft granular crystal. *Soft Matter*, 7(6), 2321.

Research Cruises

2019	SR1914. <i>R/V Sally Ride</i> . Western tropical Pacific. 2 weeks. <i>Operations: CTD, moorings, turbulence profiler</i>
2019	AR35-2. <i>R/V Neil Armstrong</i> . Iceland Basin. 2 weeks. <i>Operations: CTD, moorings</i>
2014	JR299. <i>RSS James Clark Ross</i> . Scotia Sea and Weddell Sea. 7 weeks. <i>Operations: CTD, water sampling</i>

Training courses and workshops

2015	Arctic fieldwork training short course, Cambridge, UK and Svalbard, Norway
2015	Fluid dynamics of Sustainability and the Environment Summer School, Paris, France
2014	Oceans in Weather and Climate workshop, Met Office, Exeter, UK

Oral presentations (first author only)

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| 2020 | Ocean Sciences Meeting, San Diego, USA
<i>Title: Connections between the large-scale flow and turbulence in the Samoan Passage</i> |
| 2019 | IUGG General Assembly, Montreal, Canada
<i>Title: Persistence and Variability of Turbulence in the Samoan Passage</i> |
| 2018 | Physical Oceanography Doctoral Symposium, Kailua-Kona, Hawaii, USA
<i>Title: Mechanisms of Eddy Dissipation in the Southern Ocean</i> |
| 2018 (invited) | CASPO Seminar, Scripps Institution of Oceanography, La Jolla, USA
<i>Title: Observation of a Large Lee Wave in the Southern Ocean</i> |
| 2018 | Ocean Sciences Meeting, Portland, Oregon, USA
<i>Title: Observed eddy - internal wave interaction in the Southern Ocean</i> |
| 2018 (invited) | University of Oxford, Oxford, UK
<i>Title: Observation of large lee wave in the Drake Passage</i> |
| 2017 | IAPSO-IAMAS-IAGA Joint Assembly, Cape Town, South Africa
<i>Title: Eddy dissipation by interaction with internal waves in the Drake Passage</i> |
| 2016 | Challenger Society Conference, Liverpool, UK
<i>Title: Observations of an energetic lee wave in the Drake Passage</i> |
| 2015 | IUGG General Assembly, Prague, Czech Republic
<i>Title: Observations of a large lee wave in the Drake Passage</i> |

Poster presentations (first author only)

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| 2018 | Gordon Conference on Ocean Mixing, New Hampshire, USA
<i>Title: Observed eddy – internal wave interaction in the Southern Ocean</i> |
| 2016 | Challenger Society Conference, Liverpool, UK
<i>Title: Observations of spice filaments in the Southern Ocean</i> |
| 2016 | Ocean Sciences Meeting, New Orleans, Louisiana, USA
<i>Title: Measurements of a lee wave in the Southern Ocean: energy and momentum fluxes and mixing</i> |
| 2014 | Challenger Society Conference, Plymouth, UK
<i>Title: Observations of a large lee wave in the Drake Passage</i> |

Community service

2019 - Ongoing Member of the International Association for the Physical Sciences of the Oceans (IAPSO) Early Career Scientists committee
Responsibilities: Website design, quarterly meetings

Awards

2013 Water conservation bursary, University of Reading

References

Dr. Gunnar Voet Email: gvoet@ucsd.edu
Address: MPL, Scripps Institution of Oceanography, UC San Diego,
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Prof. Matthew Alford Email: malford@ucsd.edu
Address: MPL, Scripps Institution of Oceanography, UC San Diego,
9500 Gilman Drive, #0213, La Jolla CA, 92093-0213, USA

Prof. Alberto Naveira Garabato Email: acng@noc.soton.ac.uk
Address: Ocean and Earth Science, National Oceanography Centre,
Southampton, University of Southampton Waterfront Campus, European
Way, Southampton, SO14 3ZH, United Kingdom