

Jesse Cusack

Rutgers University
Department of Marine and Coastal Sciences
71 Dudley Road
New Brunswick, NJ, 08901

Email: jmcusack@marine.rutgers.edu
Web: <https://jessecusack.github.io>

Education

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

Research Experience

2020 - Ongoing	EOAS Postdoctoral fellow at Rutgers University, USA
2018 – 2020	Postdoctoral researcher at Scripps Institution of Oceanography, University of California San Diego, USA
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
------	--

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*, 50 (10). 3043-3062.
- 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

2020 (<i>invited</i>)	Physical Oceanography Seminar, Woods Hole Oceanographic Institution, USA <i>Title: Flow-topography interactions in the Samoan Passage</i>
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 (<i>invited</i>)	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 (<i>invited</i>)	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

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 <i>Responsibilities: Website design, quarterly meetings</i>
Reviewer	Journal of Physical Oceanography, Journal of Geophysical Research: Oceans.

Awards

2013	Water conservation bursary, University of Reading
------	---

References

Available upon request.