

Bethany McDonagh

Education

University of Bologna Bologna, Italy 2020-2024	PhD Future Earth, Climate Change, and Societal Challenge Thesis title: <i>Analysis of the effects of barotropic and internal tides on the Mediterranean Sea dynamics through numerical experiments</i> , supervised by Dr. Emanuela Clementi and Prof. Nadia Pinardi.
University of Reading Reading, UK 2019-2020	MSc Atmosphere Ocean and Climate, distinction Dissertation title: <i>The future of the global monsoon in the CMIP6 model experiments</i> , supervised by Prof. Andrew Turner and Dr. Amulya Chevaturi.
University of Warwick Coventry, UK 2013-2016	BSc Physics Dissertation title: <i>Automated Identification of Structures in the Solar Corona</i> , supervised by Dr. Erwin Verwichte

Work Experience

Post-doctoral researcher Euro-Mediterranean Center on Climate Change Bologna, Italy 07/2024-present	Regional Ocean Forecasting System division Continuation of studies on barotropic and internal tides in the Mediterranean Sea. High-resolution ocean modelling project on the Gibraltar Strait.
Post-degree researcher Euro-Mediterranean Center on Climate Change Bologna, Italy 02/2024-07/2024	Regional Ocean Forecasting System division Continuation of studies on barotropic and internal tides in the Mediterranean Sea. Completion of papers and thesis corrections, preparation for thesis defence.
PhD candidate Euro-Mediterranean Center on Climate Change Bologna, Italy 11/2020-01/2024	"Analysis of the effects of barotropic and internal tides on the Mediterranean Sea dynamics through numerical experiments" in the regional modelling group of the Ocean Predictions and Applications division, supervised by Dr Emanuela Clementi (CMCC) and Professor Nadia Pinardi (University of Bologna).
Visiting Researcher Max Planck Institute for Meteorology Hamburg, Germany 01/2023-04/2023	Visiting period as part of the PhD programme at the University of Bologna. Study of internal tides in the Mediterranean Sea with Professor Jin-Song von Storch in the Ocean Energetics group.

Brainlabs is a large digital-first media agency based in London, UK. I worked in their technology department from 2016-2019, after joining their graduate scheme in 2016.

Group Account Director Brainlabs 07/2019-09/2019	Leading on software design and quality control of technology products. Leading a larger team and guiding the direction of the department. Leading on strategy for a wide variety of clients.
Tech Account Director Brainlabs 01/2018-06/2019	Designing technology products and contributing to large code bases. Managing a team with a wide range of skills to service a group of clients. Pitching the business to potential new clients, in the UK and internationally.
Tech Account Manager Brainlabs 09/2016-12/2017	Providing technology solutions for PPC to our clients, using JavaScript, Python and PHP, with the goal to improve efficiency, boost performance and add value to their business. Auditing and analysing data for clients.

Skills

Technical	Python, Linux, Fortran, Bash, netCDF, CDO, LaTeX, PHP, JavaScript
Language	English: native Italian: CEFR B2 level

Publications

1. McDonagh, B., E. Clementi, A. C. Goglio, and N. Pinardi, 2024: The characteristics of tides and their effects on the general circulation of the Mediterranean Sea, *Ocean Sci.*, **20**, 1051–1066, <https://doi.org/10.5194/os-20-1051-2024>.
2. McDonagh, B., J.-S. von Storch, E. Clementi, and N. Pinardi, 2024: Internal tides in the Mediterranean Sea. *[in prep.]*

Awards

International Workshop on Modelling the Ocean 2023	Outstanding Young Scientist Award, first place
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Conference Presentations

MonGOOS General Assembly 2023	McDonagh, B., J.-S. von Storch, E. Clementi, and N. Pinardi: Internal tides in the Mediterranean Sea, MonGOOS General Assembly 2023, Tangier, Morocco, 14-16 November 2023.
International Workshop on Modelling the Ocean 2023	McDonagh, B., J.-S. von Storch, E. Clementi, and N. Pinardi: Internal tides in the Mediterranean Sea, IWMO 2023, Hamburg, Germany, 27-30 June 2023.
European Geosciences Union 2023	McDonagh, B., E. Clementi, and N. Pinardi: The characteristics and effects of tides on the general circulation of the Mediterranean Sea, EGU General Assembly 2023, Vienna, Austria, 24–28 April 2023, EGU23-14117,

<https://doi.org/10.5194/egusphere-egu23-14117>, 2023.

**MonGOOS General
Assembly 2022**

McDonagh, B., E. Clementi, and N. Pinardi: Study of the effect of tides on vertical motion and mixing in the Mediterranean Sea using numerical experiments, MonGOOS General Assembly 2022, Florence, Italy, 22–23 November 2022.

**European Geosciences
Union 2022**

McDonagh, B., E. Clementi, N. Pinardi, A. C. Goglio, and P. Cessi: The effects of tides on vertical motion in the Mediterranean Sea, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-7628, <https://doi.org/10.5194/egusphere-egu22-7628>, 2022.

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