



Federica Borile

✉ Email: federicaborile03@gmail.com

Date of birth: 03/12/1991 Nationality: Italian

WORK EXPERIENCE

University of Bologna

City: Bologna | Country: Italy

[01/12/2023 – Current]

Post-doc, research grant

Ricostruzione del passato recente tramite tecniche di rianalisi per il Mare Mediterraneo

University of Bologna

City: Bologna | Country: Italy

[01/07/2022 – 29/11/2023]

Post-doc, research grant

The vertical circulation of the Atlantic Ocean, analysis with and without tides

CMCC Foundation

City: Bologna | Country: Italy

[04/2021 – 06/2022]

collaboration contract

Tidal effects on mesoscale structures from a hierarchy of numerical simulations of the global ocean

CMCC Foundation

City: Bologna | Country: Italy

[08/2016 – 10/2016]

collaboration contract

Analysis of the overturning circulation in the Mediterranean Sea.

EDUCATION AND TRAINING

[11/2016 – 06/2022]

PhD

University of Bologna, in collaboration with CMCC Foundation

Field(s) of study: Oceanography | **Thesis:** "Towards a broader understanding of the effects of tidal forcing on the global ocean circulation"

Advisors: dott. Simona Masina, dott. Doroteaciro Iovino, prof. Nadia Pinardi and Prof. Paola Cessi

Note: I was granted 17 months of maternity leave (12+5) for two different maternities. Moreover, the PhD has been extended for 3 months because of COVID-19 pandemic period.

[08/2014 – 07/2016]

Master degree

University of Bologna

Field(s) of study: geophysics | **Final grade:** 110/110 cum laude | **Thesis:** "On the Mediterranean Conveyor Belt System"

Master's Degree in "Fisica del Sistema Terra"

Thesis advisors: Prof. Nadia Pinardi and prof. Paola Cessi

[08/2013 – 09/2014] **master courses**

University of Pisa

Field(s) of study: applied geophysics

Master's courses on "Geofisica di Esplorazione e Applicata"

Courses attended:

- "Exploration Seismology and Geophysical Log"
- "Signal processing in Physics"
- "Fundamentals of Geology"
- "Fundamentals of Geophysics"

laboratory experience dealing with real data

[08/2010 – 10/2013] **Bachelor degree**

University of Pisa

Field(s) of study: Physics | **Final grade:** 110/110 | **Thesis:** "Langmuir circulation and boundary layers in the atmosphere".

Thesis advisor: prof. Steve Shore

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 **READING** C2 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

SKILLS

Operating systems

Unix | Microsoft

Programming languages

Python | C | Matlab | Fortran 90 | NCL

Scripting languages

bash | shell

Other programs

QGIS

PUBLICATIONS

[2025] [**The Eastern Mediterranean Sea mean sea level decadal slowdown: the effects of the water budget**](#)

Reference: Borile F., Pinardi N., Lyubartsev V., Ghani M.H., Navarra A., Alessandri J., et al. (2025) The Eastern Mediterranean Sea mean sea level decadal slowdown: the effects of the water budget. Front. Clim. 7:1472731. doi: 10.3389/fclim.2025.1472731

[2024] [**Exploratory investigations for the development of a novel Mediterranean Sea reanalysis**](#)

Borile F., Miraglio P., Vecchioni G., Aydogdu A., Clementi E., Oddo P., Pinardi N. (2024). Exploratory investigations for the development of a novel Mediterranean Sea reanalysis, RETURN Dissemination Workshop, Torino (Italy), 1-2 February 2024. DOI: 10.5281/zenodo.10598007

[2019] [**The Eastern and Western Mediterranean Overturning Index interannual variability**](#)

Lyubartsev, V., Borile, F., Clementi, E., Masina, S., Drudi, M., Coppini, G., Cessi, P., Pinardi, N. (2019): The Eastern and Western Mediterranean Overturning Index interannual variability, Section 2.4 in Copernicus marine service ocean state report, issue 4. Journal of Operational Oceanography.

[2019] [The Mediterranean Sea Overturning Circulation](#)

Pinardi, N., Cessi, P., Borile, F., and Wolfe, C. L. P. (2019). The Mediterranean sea overturning circulation. Journal of Physical Oceanography, 49(7):1699-1721.

CONFERENCES & SEMINARS

[04/2025] **European Geoscience Union general assembly** Vienna, Austria

Presentation: The Eastern Mediterranean Sea mean sea level decadal slowdown: the effects of the water budget

[11/2024] **RETURN dissemination workshop** Bologna, Italy

Poster: Improvements on the numerical modelling of a novel Mediterranean Sea reanalysis

[06/2024] **RETURN dissemination workshop** Bari, Italy

Poster: The Mediterranean Sea mean sea level from satellite altimetry and reanalysis

[04/2024] **European Geoscience Union general assembly** Vienna, Austria

Presentation: The influence of tides on the AMOC in an eddy-permitting global general circulation model

[02/2024] **RETURN dissemination workshop** Torino, Italy

Poster: Exploratory investigations for the development of a novel Mediterranean Sea reanalysis

[03/2022] **Ocean Sciences Meeting** Honolulu, USA

Virtual presentation: Tidal effects on the AMOC in a eddy permitting global general circulation model

[02/2020] **Ocean Sciences Meeting** San Diego, USA

Poster: Tidal effects in a high resolution global general circulation model

[04/2019] **European Geoscience Union general assembly** Vienna, Austria

Presentation: The Mediterranean Sea overturning circulation

Poster: Tidal effects in a high resolution global general circulation model

[09/2018] **MEDCLIVAR conference** Belgrade, Serbia

Presentation: The Mediterranean Sea overturning circulation

I authorize the use of my personal data pursuant to D.Lgs. 30/06/2003, n.196 "Codice in materia di protezione dei dati personali"

Bologna, 15/05/2025