

# Denise Fukai

## Data Scientist and Oceanographer

Last update: December 18, 2022

Up-to-date version of CV is available at

[https://denisefukai.github.io/curriculum\\_vitae](https://denisefukai.github.io/curriculum_vitae)

Data scientist and oceanographer with broader experience applied to environmental data and climate science. Focusing on data analysis, machine learning applications, while attempting to be tuned with the latest cyber security best practices protocols. Also interested in applied science.

## Education and Training

**2012/1 - 2019/2**

B.S. in **Oceanography**

**UFES** - Federal University of Espirito Santo

Vitoria, Brazil

**2014/2 - 2015/1**

Undergraduate Exchange in **Oceanography**

**UNSW** - University of New South Wales

Sydney, Australia

**2019/1 - present**

M.S. in **Meteorology**

**UFRJ** - Federal University of Rio de Janeiro

Rio de Janeiro, Brazil

## Professional Experience

Oct/2022 - present

### Vortex Mundus

vortexmundus.com | Rio de Janeiro, RJ

Wave spectral data analysis focusing on evaluation of data to support offshore navigation operations. Development of new methodologies, preprocessing and evaluation of data used by the clients.

python

data analysis

data visualisation

report writing

2019 - 2022

### MOVAR Project

Climate model data analysis: retrieving, transforming, regridding global multidimensional data, in order to analyse the South Atlantic Ocean water temperature and salinity structure and projected changes under a warming scenario.

data analysis

python

data acquisition

model data analysis

Jul - Dec 2018

Residence

 [Serra/ES - BR](#)

LinkedIn

 [denisefukai](#)

GitHub

 [denisefukai](#)

Email

 [denise.fukai@gmail.com](mailto:denise.fukai@gmail.com)

# EGS Brasil Internship

EGS Survey Brasil – Survey solutions for marine projects

Activity: Meteoceanographic data processing (wave and current profilers & CTD; meteorological station data), and elaboration of technical reports

python wave analysis environmental monitoring report writing

2017 - 2022

## CAPES Beach Morphodynamic Response of the Southeast of Brazil to the Sea Level Rise and Extremes Meteo-oceanographic Events until 2100

Research Collaborator (Data Analyst Support)

Project: This 4 years project aims to understand the short and long term local impacts and projections for the southeast Brazilian coast due to climate change. The analysis focus on extreme wave events, sea level and hydrodynamical changes and combined coastal inundation processes.

CAPES project registration no: 88887.145855/2017.00

data science wave analysis climate projection coastal

Dec/2014 - Feb/2015

## ARCCSS Summer Research Scholarship

Project: "Ocean-atmosphere interaction analysis through the first version of recharge oscillator model"

ARCCSS / IMAS – Australia

Supervisor: Eric Oliver, Neil Holbrook, Catia Domingues, James Risbey

ENSO mode variability

# Scholarships, courses and others

2012 - 2013

## Young Talents in Science Program

UFES – Coordination for the Improvement of Higher Education (Capes) – Brazil

Project: Numerical Modelling Development using ADCIRC

Supervisor: Julio Tomaz Aquije Chacaltana

matlab adcirc coastal modelling

Feb/2014 - Jun/2015

## Brazilian Scientific Mobility Program: Science without Borders

National Council for Research and Development (CNPq) – Brazil

Exchange scholarship: 6-months language course and a year of a graduate course at UNSW

english

2016 - 2017

# Oceanografia para Todos (Oceanography for Everyone)

Co-funder of an extension group to disseminate oceanography to the general public. The focus was on the translation of science and research projects through public communication. The project has now been implemented as a long term Extension Programme at University (UFES) by current members.

community outreach

extension project

14-21 Sep 2019

## Bio-Optical Oceanography Course

CEBIMar | USP – São Sebastião

Fundamentals of marine optics, tools and applied instrumentation to quantify ocean properties, especially biological variables. Field planning, data collection, operation of instruments, processing and interpretation of collected data.

bio-optics

instrumentation

data acquisition

data analysis

## Publication, Posters & Presentations

### EGUCHI et al., 2019

EGUCHI, B. M. M.; FUKAI, D. T.; BONFIM, L. N. S. KLUMB-OLIVEIRA, L. A.  
Setorização das alturas de ondas ao longo da costa do estado do Espírito Santo.  
XIII OMARSAT. 2019.

(Significant wave height clustering for the coast of Espírito Santo)

conference poster

### KLUMB-OLIVEIRA et al., 2019

KLUMB-OLIVEIRA, L. A.; SOUZA, C. R. G.; FUKAI, D. T.; ALBINO, J.; EGUCHI, B. M. M.  
Avaliação do Comportamento de Ressacas Marinhas em Base em Reanálise de Ondas e Observações in loco na Costa Sudeste do Brasil.  
XIII OMARSAT. 2019  
(Evaluation of extreme wave events based on reanalysis products and in loco wave data at the Southeast Brazilian Coa

conference presentation

### KLUMB-OLIVEIRA & FUKAI, 2020

KLUMB-OLIVEIRA, L. A.; FUKAI, D. T.  
A reanálise e sua utilização como ferramenta para o gerenciamento.  
In: MUEHE, D.; LINS-DE-BARROS, F. M.; PINHEIRO, L. (orgs.) Geografia Marinha: oceanos e costas na perspectiva de geó  
Rio de Janeiro: PGGM, 2020. p. 154-169. ISBN 978-65-992571-0-0  
(Reanalysis as a tool for coastal management)

book chapter

### FUKAI et al., 2021

FUKAI D, OAQUIM A and CIRANO M (2021).  
How Might the Ocean Change in the Future?.  
Front. Young Minds. 9:700622. doi: 10.3389/frym.2021.700622

paper

community outreach

# II Early Career Symposium on Marine Biogeochemical Modelling

7-8 Dec 2021  
CMIP6 South Atlantic water masses identification and distribution by dynamic methods.

presentation

## Certifications

- [CCNAv7: Introduction to Networks](#) - Jun, 2022
- [Cybersecurity Essentials](#) - Mar, 2022

## Additional experience

- [Research cruise PROTRINDADE/MOVAR expedition](#) - 18 - 27 Apr, 2019 | 28 Jul - 12 Aug, 2022

Python	<div><div></div><div></div><div></div><div></div></div>
Data Analysis	<div><div></div><div></div><div></div><div></div></div>
SQL	<div><div></div><div></div><div></div><div></div></div>
GitHub	<div><div></div><div></div><div></div><div></div></div>
Research	<div><div></div><div></div><div></div><div></div></div>