

João Pedro Mancio de Amorim

PHYSICAL OCEANOGRAPHER | PH.D STUDENT IN PHYSICAL OCEANOGRAPHY

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Summary

I'm a Physical Oceanographer with over 7 years of experience in data analysis and programming. Throughout my career, I've primarily worked with time series data, environmental datasets, and ocean modeling. I possess strong expertise in scientific programming using MATLAB and Python, and I have experience working in a Linux environment. Currently, I'm a Ph.D. student at the University of São Paulo, focusing on understanding how meso- and submesoscale circulation influence shelf-slope interactions and the exportation of coastal waters offshore.

Academic Experience

University of Sao Paulo

São Paulo, Brasil

PH.D STUDENT

Aug. 2023 - Present

- Member of the Ocean Dynamics Laboratory
- Using satellite data and ocean modelling to understand how Brazil Current eddies drives shelf-slope interactions on the Southern Brazilian coast.

University of Sao Paulo

São Paulo, Brasil

MASTER STUDENT

Jan. 2018 - Feb. 2020

- Member of the Satellite Oceanography Laboratory
- MATLAB and Python programming to perform time-frequency domain analyses on time-series from a total of 4 global ocean model outputs in the Atlantic Ocean.

Amazon Foundation to Support Studies and Research

Pará, Brasil

INTERNSHIP

2017

- Developed research activities as an internship at the project *Implementation of an Observatory at Amazon Coast: OCA Project*.

Federal University of Pará

Pará, Brasil

SCIENTIFIC INITIATION AT PHYSICAL OCEANOGRAPHY LABORATORY

2015-2017

- Microsoft Excel and MATLAB programming to analyze meteo-oceanographic data in two different research projects.

Work Experience

University of São Paulo Foundation

São Paulo, Brasil

PHYSICAL OCEANOGRAPHER - LABORATORY TECHNICIAN

Mar. 2021 - Present

- Research and development activities within the Santos Basin at the Ocean Dynamics Laboratory at University of São Paulo.
- Processed and analyzed *in situ* data from oceanographic cruises, moored current meters, global satellite maps, ocean models outputs and drifters data with focus on understanding regional circulation.
- Wrote technical and scientific reports for Petroleo Brasileiro S. A. (PETROBRAS).

Espirito Santense Technology Foundation

Espirito Santo, Brasil

RESEARCH SUPERVISOR

Mar. 2020 - Jan. 2021

- Developed research activities into the Ocean Modelling group at Rede Rio Doce Mar funded by Renova Foundation (Samarco & Vale).
- Analyzed time-series data from *in situ* measurements at the continental shelf.
- Developed and analyzed modelling experiments using CROCO Ocean Model.

Skills

PROGRAMMING

Python: Experience with data analysis and modelling using Pandas, NumPy, SciKit, SciPy and CartoPy.

MATLAB: Experience with data Analysis.

SQL: Basic concepts of database management.

NoSQL: Basic concepts of database management using MongoDB.

LANGUAGES

English: Advanced (C2 - TOEFL ITP)

Spanish: Basic

Portuguese: Fluent (Native)

Education

University of São Paulo

PH.D IN PHYSICAL OCEANOGRAPHY

São Paulo, Brasil

Aug. 2023 - Present

University of São Paulo

M.SC. IN PHYSICAL OCEANOGRAPHY

São Paulo, Brasil

Jan. 2018 - Fev. 2020

Federal University of Pará

B.S. IN OCEANOGRAPHY

Pará, Brasil

Jan. 2014 - Jan. 2018

- Got a Young Talents to Science Scholarship from CAPES which was given to promising students in Brasil.

Complementary Courses

Institute of Oceanology Chinese Academy of Sciences

SECOND INTERNATIONAL TRAINING SCHOOL ON SUBSURFACE MOORING OBSERVATIONS

80h

Council for Scientific and Industrial Research - South Africa

COASTAL AND REGIONAL OCEAN COMMUNITY MODEL (CROCO) 2023 SUMMER SCHOOL: BASICS AND ADVANCED

60h

Institute of Information Technology Management

DATA SCIENCE SPECIALIZATION AND PROFESSIONAL COURSE ON MACHINE LEARNING ARCHITECTURE

508h

American School of Languages

ADVANCED COURSE IN ENGLISH

680h

Federal University of Pará

STATISTICS APPLIED TO TIME SERIES

30h

Extracurricular Activity

Federal University of Pará

UNDERGRADUATE SUPERVISOR

Pará, Brazil

2021

- Mentored and supervised the conclusion work from the student Matheus Lindemberg de Sousa Fernandes titled 'VARIABILIDADE ESPAÇO TEMPORAL DA CLOROFILA-A E TEMPERATURA DA SUPERFÍCIE DO MAR NO OCEANO ATLÂNTICO TROPICAL'.

University of São Paulo

OCEANOGRAPHIC CRUISE

São Paulo, Brazil

2018

Joined into the crew of the South Atlantic Mode Water (SAMOWA) cruise, completing 14 days at sea and traveling 2517 nautical miles

Peer-Reviewed Publications

The Brazil Current cyclonic meandering and shelf-slope water exchanges at 27°S - 31°S

Deep Sea Research Part I

AMORIM, J. P. M., SILVEIRA, I. C. A DA, BORGES-SILVA, M., SOUZA-NETO, P. W. M., BERNARDO, P. S., DOTTORI, M., BELO, W. C., MARTINS, R. P., BILÓ, T. C.

2024 - Published

A vertical mode extrapolation scheme applied to the Brazil Current domain: quasi-synoptic scenarios

Ocean and Coastal Research

AMORIM, J. P. M., SILVEIRA, I. C. A DA, BORGES-SILVA, M., SOUZA-NETO, P. W. M., LAZANEO, C. Z., BERNARDO, P. S., MARTINS, R. C., DOTTORI, M., BELO, W. C., MARTINS, R. P., MOREIRA, D. L.

2023 - Published

Oceanographic conditions of the continental slope and deep waters in Santos Basin: the SANSED cruise.

Ocean and Coastal Research

SILVEIRA, I. C. A DA, LAZANEO, C. Z., AMORIM, J. P. M., BORGES-SILVA, M., BERNARDO, P. S., MARTINS, R. C., SANTOS, D. M. C., DOTTORI, M., BELO, W. C., MARTINS, R. P., MOREIRA, D. L.

2023 - Published