



Santiago Bravo

Oceanographer

Interests: Numerical modeling, Geospatial analysis, Artificial Intelligence

Education

2022 - 2024

Oceanography (M.Sc.)

Federal University of Pernambuco

Thesis: Coastal processes and oil distribution pattern in beach-estuary-reef ecosystems: south coast of Pernambuco

2014 - 2020

Oceanography (B.Sc.)

University of São Paulo

Thesis: Assessment of coastal vulnerability to erosion at Massaguaçu beach, São Paulo

Contact

✉ santiago.bravo@cmcc.it

in Santi-Bravo

🎵 [Fish Sounds.net](https://fishsounds.net)

About me

Oceanographer with a Bachelor's degree from the University of São Paulo and a Master's in Oceanography from the Federal University of Pernambuco. Experienced in numerical modeling of oil dispersion, assessing coastal vulnerability to erosion and oil spills, environmental characterization and monitoring, and geospatial data analysis. Presently working as a Marine Pollution Modeler at the Foundation - Centro Euro Mediterraneo sui Cambiamenti Climatici (CMCC). Active researcher in different marine domains, including fish sounds (fishsounds.net). Worked as an environmental analyst for offshore projects under environmental licensing in the private sector, also forming part of an emergency team (24/7) for oil dispersion modeling. During his undergraduate studies, he joined different research groups in the field of Oceanography, gaining experience with ichthyofauna and ichthyoplankton, public policies, GIS software, wave modeling, and coastal vulnerability indices. He has volunteered in different national reserves. He is interested in geospatial analysis, numerical modeling, and artificial intelligence.

Professional Experience

Marine Pollution Modeler | Private-Academic

2024 - today

Foundation - Centro Euro Mediterraneo sui Cambiamenti Climatici (CMCC)

Developing models for oil spill dispersion, coastal vulnerability and water quality.

Party Chief | Private sector

June 2024

Offshore Environmental Survey

Environmental Party Chief onboard semi-submersible drilling rig Alpha-Star. Responsible for seabed characterization through ROV imaging.

Party Chief | Private sector

May 2024

Offshore Environmental Survey

Environmental Party Chief onboard Maersk Maker. Responsible for seabed characterization through ROV imaging.

Environmental Analyst | Private sector

2020 - 2023

Prooceano | CLS Brasil

A Collecte Localisation Satellites Company

Environment. Environmental characterization and monitoring projects, Seabed imaging, Oil spill vulnerability analysis, Environmental characterization databases, and Research and Development projects.

Modeling. 24/7 emergency team member for oil spill response & search and rescue. Activities included: Oil Dispersion Modeling, Drift Transport Monitoring, Search and Rescue Modeling.

Equipment used. CTD, USBL, Dropcam, Nisking/Go-Flo water sampler, Vanveen/Boxcorer sediment sampler, Plankton nets, Portable sensors (pH, DO, turbidity), Convergence Inspector SDI/MFI, among others.

Researcher | University

2019

The Juanes Lab (Prof. Francis Juanes)

University of Victoria, Canada

Systematized review of subtropical fish species and their acoustic characteristics. Reef complexity analysis in the Caribbean, using fish biodiversity as a proxy.

🎵 [Fish Sounds.net](https://fishsounds.net)

Additional training

2023

PAM Operator Course, *Biosonar*

2023

Basic Safety Training for Oil Platforms and Helicopter Underwater Escape Training (CBSP/HUET), *Shelter*

2023

PowerBI, *Data Bloom*

2021

Mapping by Drones, *G Drones*

2021

Use of **EIVA** software to integrate data during navigation, *EIVA*

2020

Do-It-Yourself Geo Apps, *ESRI*

2019

Cartography, *ESRI*

2018

Basic Notions of Hydrographic Surveys with **Multibeam**, *PGGM*

2016

Cetacean Acoustics & Meteorology Applied to Oceanography, *Oceanography Thematic Week, Oceanographic Inst. USP*

For additional information and access to other trainings contact me please

Researcher | University

Coastal Dynamics Laboratory
University of São Paulo

2018 - 2020

"Assessment of coastal vulnerability to erosion at Massaguaçu beach, São Paulo".
Use of GIS software, wave modeling (Delft 3D), and coastal vulnerability indices.

Researcher | Conservation Area

National Center for Research and Conservation
of Northeast Marine Biodiversity - Brazil

2019

Research on impacts of oil spills on fisheries.

Researcher | NGO

Institute of Coastal Reefs - Brazil

2019

Fishing monitoring and research into the effects associated with oil spills on fisheries.

Researcher | University

Management, Ecology and
Marine Conservation Laboratory
University of São Paulo

2016 - 2019

Member of the Public Policy Group. Activities include: fisheries management assessments, technical reviews of Environmental Impact Assessments (EIA), co-production in management plan for certain Marine Conservation Areas, and georeferencing/vectorization of maps using GIS software.

Internship | Conservation Area

Serra da Bodoquena National Park - Brazil

2018

Biodiversity Monitoring Program: Bioindicator - Mammals and Birds.

Internship | Conservation Area

Marine Environmental Protected Area - North Coast of
São Paulo

2018

Systematization of data and maps, by vectorization in a GIS environment.

Internship | Conservation Area

Tupinambas Ecological Station - Brazil

2017

Monitoring of orange cup coral (*Tubastraea spp.*), through free diving

Researcher | University

Biology and Ecology of Marine Ichthyoplankton Laboratory
University of São Paulo

2016

Identification, photography and measurements of ichthyoplankton larvae.

Internship | Conservation Area

Uatumã Biological Reserve - Amazon Brazil

2015

Coordination of the Biodiversity Monitoring Program: Bioindicator - Mammals and Birds.

Skills

Microsoft Office (+6 apps)	10+ an.
QGIS / ArcGIS	5+ yrs.
MEDSLICK II CMCC	1 yrs
Python	4+ yrs.
Delft 3D	3+ yrs.
OSCAR SINTEF	1+ yrs.
PowerBI	1 yr.
Photography	12+ yrs.

Languages

Portuguese	Native
Spanish	Native
English	Advc

Internship | NGO

Center for the Preservation and Research of Aquatic Mammals and Turtles - Amazon Brazil

2015

Monitoring the Spawning of Amazon Chelonians. Assistance in the management of Wildlife rehabilitation.

Internship | NGO

Right Whale Project – Australis Institute - Brazil

2015

Field monitoring of Southern Right Whales (*Eubalaena australis*), environmental education, public service and data digitization.

Researcher | University

Laboratory of Ecology of Reproduction and Recruitment of Marine Organisms
University of São Paulo

2014

Experience with species identification, triage and primary data collection of ichthyofauna.

Publications

- Atake I., Ramos J., **Bravo S.**, Dissanayake A., Coppini G., Mannarini G. (2025). "WITOIL service in the context of Digital Twins – Bridging Oil spill simulations from Medslik-II into digital cloud domains". In: *EGU General Assembly 2025, Copernicus Meetings*.
- Atake I., Coppini G., Daffinà F., Ramos J., **Bravo S.**, Dissanayake A., Scuro M., Hoxhaj M., Mannarini G., Liubartseva S. (2025). "Operational oil spill monitoring and forecasting in the Kerch Strait accident in December 2024". In: *EGU General Assembly 2025, Copernicus Meetings*.
- Looby A., Erbe C., **Bravo S.**, Cox K., Davies H. L., Di Iorio L., Jézéquel Y., Juanes F., Martin C. W., Mooney T. A., Radford C., Reynolds L. K., Rice A. N., Riera A., Rountree R., Spriel B., Stanley J., Vela S., Parsons M. J. G. (2024). "World Register of Marine Species Underwater Sonifery Data Repository". In: *Borealis, Version 2*.
- Looby A., Cox K., **Bravo S.**, Rountree R., Juanes F., Riera A., Vela S., Davies H., Reynolds L., Martin C. (2022). "Fish Sound Production Research: Historical Practices and Ongoing Challenges". In: *Popper, A.N., Sisneros, J., Hawkins, A.D., Thomsen, F. (eds) The Effects of Noise on Aquatic Life . Springer, Cham*.
- Cox K., Looby A., Vela S., Riera A., **Bravo S.**, Davies H., Rountree R., Spriel B., Reynolds L., Martin C., Matwin S., Juanes F. (2024). "FishSounds Version 1.1: Data Archive, User Experience, and Online Resources". In: *Popper, A.N., Sisneros, J., Hawkins, A.D., Thomsen, F. (eds) The Effects of Noise on Aquatic Life . Springer, Cham*.
- Castellões P., **Bravo S.**, Machado B., Meurer A., Francisco A., Marques da Cruz L., Bastos F., Grijó A. (2024). "Protocolo de imageamento da cobertura do fundo marinho para geração de dados quali-quantitativos passíveis de compartilhamento em banco de dados georreferenciados". In: *Rio Oil & Gas Expo and Conference 2024, IBP. Rio de Janeiro, RJ, Brazil, 2024*.
- Bravo S.**, Costa M. (2024). "Padrão de distribuição do óleo via modelagem numérica nos ecossistemas praia-estuário-Recife: litoral sul de Pernambuco/PE". In: *Dissertação (Mestrado) – Universidade Federal de Pernambuco. CTG. Programa de Pós-Graduação em Oceanografia, 2024, 551.46 CDD (22. ed.), BCTG/2024-104, UFPE*.
- Looby A., Erbe C., **Bravo S.**, Cox K., Davies H., Di Iorio L., Jézéquel Y., Juanes F., Martin C., Mooney T., Radford C., Reynolds L., Rice A., Riera A., Rountree R., Spriel B., Stanley J., Vela S., Parsons M. (2023). "Global inventory of species categorized by known underwater sonifery". In: *Scientific Data*.

- Looby A., **Bravo S.**, Juanes F., Rountree R., Riera A., Davies H., Spriel B., Vela S., Reynolds L., Martin C., Cox K. (2023). "**The importance of context in the acoustic behaviors of marine, subtropical fish species**". In: *The Journal of the Acoustical Society of America*.
- Looby A., Vela S., Cox K., Riera A., **Bravo S.**, Davies H., Rountree R., Reynolds L., Martin, C., Matwin S., Juanes F. (2022). "**FishSounds Version 1.0: A website for the compilation of fish sound production information and recordings**". In: *Ecological Informatics*.
- Looby A., Cox K., **Bravo S.**, Rountree R., Juanes F., Reynolds L., Martin C. (2022). "**A quantitative inventory of global soniferous fish diversity**". In: *Reviews in Fish Biology and Fisheries*.
- Moraes C., Correa A., Castellões P., Pellegrini J., Grijó A., **Bravo S.** (2022). "**Definição de malha amostral para atingir diferentes objetivos em um projeto de caracterização ambiental (estudo de caso - Bloco C-M-541 - Bacia de Campos)**". In: *Proceedings of the Rio Oil, Gas Expo and Conference. IBP.*, Rio de Janeiro, RJ, Brazil, 2022.
- **Bravo S.**, Siegle E., Stein L. (2020). "**Avaliação da vulnerabilidade costeira na praia de Massaguaçu, São Paulo**". In: *Biblioteca Prof. Dr. Gelso Vazzoler, Instituto Oceanográfico da Universidade de São Paulo*, Setembro 12, 2020.

Honors and Awards

- **Mitacs Globalink Research Internship** | 2019
Competitive initiative for international undergraduate students from the following countries: Australia, Brazil, Chile, China, Colombia, France, Germany, Hong Kong, India, Mexico, Pakistan, South Korea, Taiwan, Tunisia, Ukraine, United Kingdom and United States. From May to October each year, the highest ranked applicants participate in a 12-week research internship under the supervision of Canadian university professors in a variety of academic disciplines, from science, engineering and mathematics to humanities and social sciences.
- **The National Society of High School Scholars** | 2012
Recognition of high school students for their academic achievements and their service to local communities.

15th May 2025