Cesar B Rocha

Citizenship:	Brazilian; US Permanent Resident since 2021
Affiliation:	Department of Marine Sciences, University of Connecticut
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Education

2018	Ph.D. in Physical Oceanography, **Scripps Institution of Oceanography, UC San Diego**
2013	M.Sc. in Physical Oceanography, **University of São Paulo**, Brazil
2011	B.Sc. in Oceanography, **University of São Paulo**, Brazil

Employment History

Aug 2020-now	Assistant Professor, **Department of Marine Sciences, University of Connecticut**
2018 - 2020	Postdoctoral Scholar, **Woods Hole Oceanographic Institution**
2013-2018	Graduate Research Assistant at **Scripps Institutution of Oceanography**, University of California San Diego

Secondary Academic Appointments

Aug 2020-now	Guest Investigator, **Department of Physical Oceanography, Woods Hole Oceanographic Institution**
2019–2020	Research Assistant Professor, **Department of Marine Sciences, University of Connecticut**
2016-2018	Graduate Writing Consultant at **Writing + Critical Expression Hub, University of California San Diego**

Individual Grants

2022-present	*Mesoscale Eddies in the Brazilian Continental Margin*, PI, $333 k. National Science Foundation (NSF), Division of Ocean Sciences
2020-present	*Start-up fund*, PI, $270 k. University of Connecticut (UConn), Department of Marine Sciences
2018-2020	*J. Seward Johnson Postdoctoral Scholarship*, $60 k/year. Woods Hole Oceanographic Institution (WHOI)
2016-2018	*Earth and Planetary Science Fellowship*, $35 k/year. National Aeronautics and Space Administration (NASA)

Honors and Awards

2020 | Editors' Citation for Excellence in Refereeing for Geophysical Research Letters, **American Geophysical Union**

2018 | Postdoctoral Fellowship, **Woods Hole Oceanographic Institution**

2017 | Laureate of the French-American Doctoral Exchange Program, **Embassy of France in the United States**

2016 | NASA Earth and Planetary Sciences Graduate Fellowship, **National Aeronautics and Space Administration**

2015 | Geophysical Fluid Dynamics Fellowship, **Woods Hole Oceanographic Institution**

2011 | Master's Research Fellowship, **Fundação de Amparo à Pesquisa do Estado de São Paulo**

2012 | Master's International Exchange Research Fellowship, **Fundação de Amparo à Pesquisa do Estado de São Paulo**
Visited the University of Massachusetts Dartmouth, hosted by Prof. Amit Tandon, for 4 months to conduct research as part of Master's thesis.

2011 | Best Honors Thesis in Oceanography, **Oceanographic Institute, University of São Paulo**

2010 | Undergraduate Research Fellowship, **Fundação de Amparo à Pesquisa do Estado de São Paulo**

Publications

Scientific articles (in reverse chronological order)

18. SOARES, S., GILLE, S. T., CHERESKIN, T. K., FIRING, E., HUMMON, J., **ROCHA, C. B.**: Transition from balanced to unbalanced motion in the eastern tropical Pacific, *Journal of Physical Oceanography, In press.*

17. CHINI, G., MICHEL, G., JULIEN, K., **ROCHA, C. B.**, CAULFIELD, C. : Exploiting self-organized criticality in strongly stratified turbulence, *Journal of Fluid Mechanics*, v. 933, pp. A22, 2022.

16. DE MAHIQUES, M. M., LOBO, F. J., SCHATTNER, U., LOPEZ-QUIROS, A., **ROCHA, C. B.**, DIAS, R. J. S., MONTOYA-MONTES , I., VIEIRA, A. C. B.: Geomorphological imprint of opposing ocean bottom currents: a case study from the southeastern Brazilian Atlantic margin, *Marine Geology*, v. 444, pp. 106715, 2022.

15. DE MAHIQUES, M. M., VIOLANTE, R. , FRANCO-FRAGUAS, P., BURONE, L., **ROCHA, C. B.**, ORTEGA, L., DOS SANTOS, R. F., KIM, B. S. M., FIGUEIRA, R. C. L., BÍCEGO, M. C.: Control of oceanic circulation on sediment distribution in the southwestern Atlantic margin (23 to 55° S), *Ocean Science*, v. 17, pp.1213–1229, 2021.

14. NAPOLITANO, D. C., **ROCHA, C. B.**, SILVEIRA, I. C. A., FLIERL, G. R., AND SIMOES-SOUSA, I. T.: Can the Intermediate Western Boundary Current recirculation trigger the Vitória Eddy formation?, *Ocean Dynamics*, v. 71, pp. 281–292, 2021.

13. STEVENS, B. ET AL.: EUREC^{4}A: Elucidating the role of clouds-circulation coupling in climate, *Earth Systems Science Data*, v. 13, pp. 4067–4119, 2021.

12. **ROCHA, C. B.**, N. CONSTANTINOU, S. G. LLEWELLYN-SMITH, W. R. YOUNG: The Nusselt numbers of horizontal convection, *Journal Fluid Mechanics*, v. 894, p. A24-1-17, 2020.

11. **ROCHA, C. B.**, T. BOSSY, S. G. LLEWELLYN-SMITH, W. R. YOUNG: Improved bounds on horizontal convection, *Journal Fluid Mechanics*, v. 883, pp. 41–62, 2020.

10. NAPOLITANO, D. C., I. C. A. DA SILVEIRA, **C. B. ROCHA**, G. R. FLIERL, P. H. R. CALIL, AND R. P. MARTINS: On the steadiness and instability of the Intermediate Western Boundary Current between 24°S and 18°S, v. 49, pp. 3127-3143, 2019.

9. PARADISE, A., **C. B. ROCHA**, P. BARPANDA, N. NAKAMURA: Blocking statistics in a varying climate: lessons from a 'traffic jam' model with pseudostochastic forcing, *Journal of Atmospheric Sciences*, v. 76, pp. 3013-3027, 2019.

8. T. K. CHERESKIN, **C. B. ROCHA**, S. T. GILLE, D. MENEMENLIS, AND M. PASSARO: Characterizing the transition from balanced to unbalanced motions in the southern California Current,, *Journal of Geophysical Research–Oceans*, v. 124, pp. 2088-2109, 2019.

7. **ROCHA, C. B.**, G. L. WAGNER, W. R. YOUNG: Stimulated generation: extraction of energy from balanced flow by near-inertial waves, *Journal Fluid Mechanics*, v. 847, pp. 417–451, 2018.

6. ARDHUIN, F., S. T. GILLE, D. MENEMENLIS, **C. B. ROCHA**, N. Rascle, B. Chapron, J. Gula, J. Molemaker: Small-scale open-ocean currents have large effects on wind-wave heights, *Journal Geophysical Research–Oceans*, v. 122, pp. 4500-4517, 2017.

5. **ROCHA, C. B.**, S. T. GILLE, T. K. CHERESKIN, D. MENEMENLIS: Seasonality of submesoscale dynamics in the Kuroshio Extension, *Geophysical Research Letters*, v. 43, pp. 11304–11311, 2016.

4. **ROCHA, C. B.**, T. CHERESKIN, S. T. GILLE, AND D. MENEMENLIS: Mesoscale to submesoscale wavenumber spectra in Drake Passage, *Journal Physiscal Oceanography*, v. 46, pp. 601–620, 2016.

3. **ROCHA, C. B.**, W. R. YOUNG, I. GROOMS: On Galerkin approximations of the surface-active quasigeostrophic equations, *Journal Physiscal Oceanography*, v. 46, pp. 125–139, 2016.

2. **ROCHA, C. B.**, I. C. A. DA SILVEIRA, B. M. CASTRO, J. A. M. LIMA: Vertical structure, energetics, and dynamics of the Brazil Current System at 22S–28S, *Journal Geophysical Research–Oceans*, v. 119, pp. 55-69, 2014.

1. **ROCHA, C. B.**, A. TANDON, I. C. A. DA SILVEIRA, AND J. A. M. LIMA, Traditional quasi-geostrophic modes and surface quasi-geostrophic solutions in the Southwestern Atlantic, *Journal Geophysical Research–Oceans*, v. 118, pp. 2734–2745, 2013.

Other relevant publications

1. J. T. FARRAR, E. D'ASARO, E. ROGRIGUEZ, A. SHCHERBINA, E. CZECH, P. MATHIAS, S. NICHOLAS, F. BINGHAM, A. MAHADEVAN, M. OMAND, L. RAINVELLI, C. LEE, D. CHELTON, R. SAMELSON, L. O'NEILL, L. LENAIN, D. MENEMENLIS, D. PERKOVIC-MARTIN, P. MOUROULIS, M. GIERACH, D. THOMPSON, A. WINETEER, H. TORRES, P. KLEIN, A. THOMPSON, J. MCWILLIAMS, J. MOLEMAKER, R. BARKAN, J. WENEGRAT, **C. ROCHA**, G. JACOBS, J. D;ADDEZIO, S. DE HALLEUX, R. JENKINS: S-MODE: The Submesoscale Ocean Dynamics Experiment, Proceedings of the 2020 IEEE International Geoscience and Remote Sensing Symposium.

2. ZARON, E. D. AND **C. B. ROCHA**: Internal Gravity Waves and Meso/Sub-mesoscale Currents in the Ocean—anticipating high-resolution observations from the Surface Water & Ocean Topography (SWOT) Swath Altimeter Mission, v. 99, p. ES155-ES157, *Bulletin of the American Meteorological Society*, 2018.

3. GILLE, S. T., R. ABERNATHEY, T. CHERESKIN, B. CORNUELLE1, P. HEIMBACH, M. MAZLOFF, **C. B. ROCHA**, S. SOARES, M. SONNEWALD, B. VILLAS BOAS, J. WANG: Open Code Policy for NASA Space Science: A perspective from NASA-supported ocean modeling and ocean data analysis, *White Papers on Best Practices for a Future Open Code Policy for NASA Space Science*, National Academy of Sciences, pp. 1-7, 2018.

Synergistic Activities

2020-now | Member of the *Submesoscale Ocean Dynamics Experiment* Science Team, **National Aeronautics and Space Administration**; lead for saildrone efforts

2020-now | Associate Editor of the journal *Ocean and Coastal Research*

2021 | External member of the proposal review panel for the Observing and Climate Modeling Program, **National Oceanic and Atmospheric Administration**

2020 | External member of the proposal review panel for the Physical Oceanography Program, **National Aeronautics and Space Administration**

2020 | External member of the proposal review panel for the Physical Oceanography Directory, **National Science Foundation**

2020 | Co-organizer and co-convener of the session *Interactions Between Internal Waves and Mesoscale/Submesoscale Currents: Physics and Impacts on Ocean Energetics and Mixing* (oral and poster), **Ocean Sciences Meeting**

University Teaching

2021 | MARN5895 Research Computing in Marine Sciences
Fully developed this course as an active-learning/flipped graduate class, which was offered to 12 graduate students—the largest graduate enrollment in the Department of Marine Sciences in Fall 2021.

2021 | MARN3002 Foundations of Marine Sciences
Responsible for the physics portion of this course, which is co-taught with Prof. Hans Dam (biological component).

2020 | MARN5885 Ocean Expedition
Taught guest lecture on instruments for ocean physics research and held small-group session on data analysis of ocean physics measurements taken during field work.

University Mentoring

Primary Advisor

2021–present | Paban Bhuyan (Ph.D. student)
University of Connecticut

2021–present | Mackenzie Blanusa (Master's student)
University of Connecticut

2022–present | Vicki You (Undergraduate student)
University of Connecticut

Associate Advisor

2020–present | Mengyang Zhou (Ph.D. student)
University of Connecticut

University Service

Educational Programs

2020–present | Member of the Graduate Program Advisory Committee, **Department of Marine Sciences**

2020–present | Member of the Undergraduate Program Advisory Committee, **Department of Marine Sciences**

Faculty Recruitment

2020 | Member of search committee for an Assistant Professor in Physical Oceanography, **Department of Marine Sciences**

College-wide committees

2020-2021 | Member of the ad hoc Working Group for Data Science Graduate Initiatives, **College of Liberal Arts and Sciences**