DR. MERCEDES POZO BUIL

University of California Santa Cruz; NOAA Southwest Fisheries Science Center
mercedes.pozo@ucsc.edu • www.merpozobuil.com

RESEARCH INTERESTS

Subsurface ocean variability. Eastern Boundary Upwelling Systems. Ocean modelling. Hypoxia and ocean acidification. Large-scale changes in water masses and circulation.

EDUCATION

Ph.D., Earth & Atmospheric Sciences 2012 – 2017
School of Earth & Atmospheric Sciences, Georgia Institute of Technology. Atlanta

M.S., Physical Oceanography 2008 – 2009
University of Cádiz, Cádiz, Spain

B.S., Environmental Sciences 2006 – 2008
University of Cádiz, Cádiz, Spain

B.S., Marine Sciences 2002 – 2006
University of Cádiz, Cádiz, Spain

RESEARCH EXPERIENCE

Assistant Project Scientist, *University of California Santa Cruz* 2020 – present

Postdoctoral Scholar, *University of California Santa Cruz* 2018 – 2020

Graduate Research Assistant, *School of Earth & Atmospheric Sciences, Georgia Institute of Technology.* 2012 – 2017

Graduate Research Assistant, *Marine and Environmental Sciences, University of Cadiz, Spain.* Topic: "Implementation of a Regional Ocean Modeling System (ROMS) to simulate the Mediterranean Outflow in the Gulf of Cadiz." 2009 – 2012

R&D projects, *Marine and Environmental Sciences, University of Cadiz, Spain.* "Europe Project: Improvement in Teaching and Learning Materials for Environmental Impact Assessment." 2006

PUBLICATIONS

Samhouri, J.F., Feist, B.E., Jacox, M., Liu, O.R., Richerson, K., Steiner, E., Wallace, J., Andrews, K., Barnett, L., Beaudreau, A.H., Bellquist, L., **Pozo Buil, M.**, Haltuch, M.A., Harley, A., Harvey, C.J., Kaplan, I.C., Norman, K., Phillips, A., Rasmuson, L.K., Ward, E.J., Whitmire, C., Selden, R.L., 2024.Stay or go? Geographic variation in risks due to climate change for fishing fleets that adapt in-place or adapt on-the-move. https://doi.org/10.1371/journal.pclm.0000285

Pozo Buil, M., Fiechter, J., Jacox M., Bograd, S., Alexander, M., 2023. Evaluation of bias correction methods for dynamical downscaled future projections of the California Current Upwelling System. *Earth and Space Science*. 10, e2023EA003121. https://doi.org/10.1029/2023EA003121

Lezama-Ochoa, N., Brodie, S., Welch, H., Jacox, M. G., **Pozo Buil**, M., Fiechter, J., Cimino, M., Muhling, B., Dewar, H., Becker, E. A., Forney, K. A., Costa, D., Benson, S. R., Farchadi, N., Braun, C., Lewison, R., Bograd, S., & Hazen, E. L., 2023. Divergent responses of highly migratory species to

climate change in the California Current. Diversity and Distributions, 00, 1–14. https://doi.org/10.1111/ddi.13800

Brodie S., **Pozo Buil, M.,** Welch, H., Bograd, S., Hazen, E., Santora, J., Seary, R., Schroeder, I., Jacox M., 2023. Ecological forecasts for marine resource management during climate extremes. *Nature Communications*. 14, 7701. https://doi.org/10.1038/s41467-023-43188-0

Jacox, M., **Pozo Buil, M.**, Brodie, S., Alexander, M., Amaya, D., Bograd, S., Edwards, C., Fiechter, J., Hazen, E., Hervieux, G., Tommasi, D., 2023. Downscaled seasonal forecasts for the California Current System: Skill assessment and prospects for living marine resource applications. *PLOS Climate*. PLOS Climate 2(10): e0000245. https://doi.org/10.1371/journal.pclm.0000245

Mogen, S., Lovenduski, N., Yeager, S., Keppler, L., Sharp, J., Bograd, S., Cordero-Quiros, N., Di Lorenzo, E., Hazen, E., Jacox, M., **Pozo Buil, M**., 2023. Skillful predictions of multiple marine stressors in the surface and subsurface ocean. *Earth's Future*. 11, e2023EF003605. doi.org/10.1029/2023EF003605

Shi, H., **Pozo Buil, M.**, Bograd, S., Garcia-Reyes, M., Jacox, M., Black, B., Sydeman, W., Rykaczewski, R., 2023. Future change of summer hypoxia in coastal California Current. *Frontiers Marine Sciences*. doi: 10.3389/fmars.2023.1205536

Liu, O. R., Ward, E. J., Anderson, S. C., Andrews, K. S., Barnett, L. A. K., Brodie, S., Carroll, G., Fiechter, J., Haltuch, M. A., Harvey, C. J., Hazen, E. L., Hernvann, P.-Y., Jacox, M., Kaplan, I. C., Matson, S., Norman, K., **Pozo Buil, M.**, Selden, R. L., Shelton, A., and Samhouri, J. F., 2023. Species redistribution creates unequal outcomes for multispecies fisheries under projected climate change. *Science Advances*, 9(33), eadg5468. doi.org/doi:10.1126/sciadv.adg5468

Smith, J., **Pozo Buil, M.**, Muhling, B., Tommasi, D., Brodie, S., Frawley, T., Fiechter, J., Koenigstein, S., Cornell, A., Alexander, M., Bograd, S., Cordero-Quirós, N., Crowder, L., Curchitser, E., Green, S., Hardy, N., Haynie, A., Hazen, E., Holsman, K., Le Fol, G., Lezama-Ochoa, N., Rykaczewski, R., Stock, C., Stohs, S., Sweeney, J., Welch, H., and Jacox, M., 2023. Projecting climate change impacts from physics to fisheries: a view from three California Current fisheries. *Progress in Oceanography*. 211, 102973. doi.org/10.1016/j.pocean.2023.102973

Karp, M., Brodie, S., Smith, J., Richerson, K., Selden, R., Liu, O., Muhling, B., Samhouri, J., Barnett, L., Hazen, E., Ovando, D., Fiechter, J., Jacox, M., and **Pozo Buil, M.**, 2023, Projecting species distributions using fishery dependent data, *Fish and Fisheries*, doi:10.1111/faf.12711.

Bograd, S., Jacox, M., Hazen, E., Lovecchio, E., Montes, I., **Pozo Buil, M.**, Shannon, L., Sydeman, W. J., and Rykaczewski, R. R., 2023. Climate change impacts on eastern boundary upwelling systems, *Annual Reviews of Marine Science*, doi:10.1146/annurev-marine-032122-021945.

Pozo Buil, M., Ianiri, H., Carroll, S. L., & Trayler, R., 2022. ClimateWEST: A climate science activity. In S. Seagroves, A. Barnes, A. J. Metevier, J. Porter, & L. Hunter (Eds.), Leaders in effective and inclusive STEM: Twenty years of the Institute for Scientist & Engineer Educators (pp. 291–304). UC Santa Cruz: Institute for Scientist & Engineer Educators. https://escholarship.org/uc/item/7ch3f7zz

Santiago, N., Gee, C., Howard, S., Macho, J., and **Pozo Buil, M.**, 2022. Utilizing equitable and inclusive design principles to promote STEM identity of community college transfer students. In S. Seagroves, A. Barnes, A. J. Metevier, J. Porter, & L. Hunter (Eds.), Leaders in effective and inclusive STEM: Twenty

years of the Institute for Scientist & Engineer Educators (pp. 291–304). UC Santa Cruz: Institute for Scientist & Engineer Educators. https://escholarship.org/uc/item/2kz8h9s7

Cordero-Quirós, N., Jacox, M., **Pozo Buil, M.**, Bograd, S., 2022. Future changes in eddy kinetic energy in the California Current System from dynamically downscaled climate projections. *Geophysical Research Letters*. doi.org/10.1029/2022GL099042.

Koenigstein, S., Jacox, M., **Pozo Buil, M.**, Fiechter, J., Muhling, B., Brodie, S., Kuriyama, P., Auth, T., Hazen, E., Bograd, S., 2022. Population projections of Pacific sardine driven by ocean warming and changing food availability in the California Current. *Fish and Fisheries*. doi/10.1093/icesjms/fsac191

Koehn, L., Nelson L., Samhouri, J. F., Norman, K., Jacox, M., Cullen, A., Fiechter, J., **Pozo Buil, M.**, Levin, P. S., 2022. Social-ecological vulnerability of fishing communities to climate change: a U.S. West Coast case study, *PLOS ONE,* doi:10.1371/journal.pone.0272120.

Brodie, S, Smith, J., Muhling, B., Barnett, L., Carroll, G., Fiedler, P., Bograd, S., Hazen, E., Jacox, M., Andrews, K., Barnes, C., Crozier, L., Fiechter, J., Fredston, A., Haltuch, M., Harvey, C., Holmes, Karp, M., Liu, O., Malick, M., **Pozo Buil, M.**, Richerson, K., Rooper, C., Samhouri, J., Seary, R., Selden, R., Thompson, A., Tommasi, D., Ward, E., and Kaplan, I. 2022, Recommendations for quantifying and reducing uncertainty in climate projections of species distributions, *Global Change Biology*, doi:10.1111/gcb.16371

Jacox, M., Alexander, M., Amaya, D., Becker, E., Bograd, S., Brodie, S., Hazen, E., **Pozo Buil, M.**, and Tommasi, D., 2022. Global seasonal forecasts of marine heatwaves. *Nature. 604, 486-490,* doi:10.1038/s41586-022-04573-9

Mogen, S., Lovenduski, N., Dallmann, A., Gregor, L., Sutton, A., Bograd, S., Cordero Quiros, N., Di Lorenzo, E., Hazen, E., Jacox, M., **Pozo Buil, M.**, and Yeager S., 2022. Ocean biogeochemical signatures of the North Pacific Blob. *Geophysical Research Letters*, doi:10.1029/2021GL096938

Smith, J. A., **Pozo Buil**, **M.**, Fiechter, J., Tommasi, D., and Jacox, M., 2022. Projected novelty in the climate envelope of the California Current at multiple spatial-temporal scales. *PLOS Climate*, 1(4): e0000022, https://doi.org/10.1371/journal.pclm.0000022

Pozo Buil, M., Jacox, M., Fiechter, J., Alexander, M., Bograd, S., Curchitser E., Edwards C., Rykaczewski, R., Stock, C., 2021. A dynamically downscaled ensemble of future projections for the California Current System. *Frontiers Marine Sciences*, https://doi.org/10.3389/fmars.2021.612874

Fiechter, J., **Pozo Buil, M.,** Jacox, M., Alexander, M., Rose, K., 2021. Projected shifts in 21st century sardine distribution and catch in the California Current. *Frontiers Marine Sciences*, https://doi.org/10.3389/fmars.2021.685241

Kearney, K. A., Bograd, S., Drenkard, E., Gomez, F., Haltuch, M., Hermann, A., Jacox, M., Kaplan, I., Koenigstein, S., Luo, J., Masi, M., Muhling, B., **Pozo Buil, M.**, and Woodworth-Jefcoats P., 2021, Using global-scale earth system models for regional fisheries applications, *Frontiers Marine Sciences*, https://doi.org/10.3389/fmars.2021.622206

Drenkard, E., Stock, C., Adcroft, A., Alexander, M., Balaji, V., Bograd, S., Butenschon, M., Cheng, W., Curchitser, E., Di Lorenzo, E., Dixon, K., Dussin, R., Haynie, A., Harrison, M., Hermann, A., Hollowed, A., Holsman, K., Holt, J., Jacox, M., Jang, C., Kearney, K., Muhling, B., **Pozo Buil, M.**, Ross, A., Britt Sando, A., Tommasi, D., and Wang M., 2021, Next-generation regional ocean projections for living

marine resource management in a changing climate, *ICES Journal of Marine Science*. fsab100, https://doi.org/10.1093/icesjms/fsab100

Brodie, S., Abrahms, B., Bograd, S.J., Carroll, G., Hazen, E.L., Muhling, B., **Pozo Buil, M.**, Smith, J. A, Welch, H., Jacox, M., 2021. Exploring timescales of predictability in species distributions. *Ecography*. https://doi.org/10.1111/ecog.05504

Smith, J. A., Muhling, B., Sweeney, J., Tommasi, D., **Pozo Buil, M.**, Fiechter, J., & Jacox, M. G., 2021. The potential impact of a shifting Pacific sardine distribution on U.S. West Coast landings. *Fisheries Oceanography*. https://doi.org/10.1111/fog.12529

Evans N., Schroeder I., **Pozo Buil, M.**, Jacox M., Bograd S., 2020. Drivers of Subsurface Deoxygenation in the Southern California Current System. *Geophysical Research Letters*, 47, e2020GL089274, https://doi.org/10.1029/2020GL089274

Jacox M., …, **Pozo Buil, M.**, et al., 2020. Seasonal-to-interannual prediction of U.S. coastal marine ecosystems: Forecast methods, mechanisms of predictability, and priority developments *Progress in Oceanography*, https://doi.org/10.1016/j.pocean.2020.102307

Capotondi A., …, **Pozo Buil M.**, et al., 2019. Observational Needs Supporting Marine Ecosystems Modeling and Forecasting: Insights from U.S. Coastal Applications. *Frontiers in Marine Science, 6, 623*. https://doi.org/10.3389/fmars.2019.00623

Wong-Villacres, M, Ehsan U., Salomon A., **Pozo Buil, M**., 2017. Design Guidelines for Parent-School Technologies to Support the Ecology of Parental Engagement. *2017 ACM Interaction Design & Children conference*, Conference paper, https://doi.org/10.1145/3078072.3079748

Pozo Buil, M. and Di Lorenzo, E., 2017. Decadal predictability of coastal hypoxia in the Northeast Pacific. *Geophysical Research Letters,* 44, 4204–4213, https://doi.org/10.1002/2017GL072931

Pozo Buil, M. and Di Lorenzo, E., 2015. Decadal changes in Gulf of Alaska upwelling source waters. *Geophysical Research Letters,* 42: 1488–1495, https://doi.org/10.1002/2015GL063191

Bograd, S. J., **Pozo Buil, M.**, Di Lorenzo, E., Castro G. C., Schroeder I., Goericke R., Anderson C., Benitez-Nelson, C. and Whitney, F., 2015. Changes in source waters to the southern California Bight. *Deep Sea Research Part II: Topical Studies in Oceanography, 112, 42-52,* https://doi.org/10.1016/j.dsr2.2014.04.009

GRANTS

Ensuring resilience and adaptive capacity of California Current System fisheries under climate-driven ecosystem shifts. PIs: B. Muhling (lead), D. Tommasi, **M. Pozo Buil**, I. Kaplan. NOAA-OAR-CPO-2023-2007440. Budget: $1,196,438. **Awarded** 2024-2027

Identifying climate change refugia in coastal and pelagic ocean habitats. PIs: M. Provost (lead), **M. Pozo Buil**, B. Muhling. CA Governor's Office of Planning and Research. *Budget: $286,674.* ***Awarded*** 2023-2025

Understanding the variability and projecting future changes of biogeochemistry in the California Current Upwelling System. PIs: **M. Pozo Buil (lead)**, M. Jacox, D.Tommasi, J.Fiechter, S. Bograd, R. Rykaczewski. NOAA-OAR-CPO-2020-2006076. 2020-2023

Budget: $509,937. **Awarded**

Mechanisms of interannual- to decadal-scale predictability for ocean physics and biogeochemistry in the California Current System. PIs: **M. Pozo Buil (lead),** N. Lovenduski, E. Di Lorenzo, M. Jacox, S. Bograd, E. Hazen. NOAA-OAR-CPO-2019-2005530. Budget: $863,201. **Awarded** 2020-2023

ACADEMIC PRESENTATIONS

Oral presentation: *Impact of the Bias Correction Method for Dynamical Downscaled Predictions for the California Current System.* Ocean Sciences Meeting. New Orleans, U.S. February 2024

Oral presentation: *Evaluation of different dynamical downscaling methods for future projections of the California Current Upwelling.* 69th Annual Eastern Pacific Ocean Conference, California, U.S. September 2023.

Oral presentation: *Predictability in the California Current Coastal Ecosystem*. Gordon Research Conference: Coastal Ocean Physics and its Connections to Marine Ecosystems. Smithfield, RI, June 2023. **INVITED**

Oral presentation: *Multiyear Oxygen Variability in Source Water Contributions to the California Current System*. Effects of Climate Change on the World's Ocean (ECCWO5). Norway, April 2023.

Oral presentation: *Future Changes in the California Current Ecosystem*. Future Coastal Ocean Climates FLAME Workshop. Liverpool, U.K., February 2023.

Oral presentation: *Ecosystem Applications of Downscaled Climate Projections for the California Current System.* NOAA Fisheries Ecology Division seminar series. Santa Cruz, November 2022. **INVITED**

Oral presentation: *Future Changes in the California Current Ecosystem*. Eastern Boundary Upwelling System Conference. Lima, Peru, September 2022.

Oral presentation: *Future Changes in the California Current Ecosystem*. Ocean Knowledge Seminar. Universidad de Ingeniería y Tecnología. Lima, Peru, September 2022. **INVITED**

Oral presentation: *ClimateWEST: A climate science activity*. Advancing Inclusive Leaders in STEM: 20 Years of the Professional Development Program (PDP) Conference. Hilo, Hawai'i, May 2022.

Oral presentation: BECI *Future Changes in the California Current Ecosystem.* National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara. April 2022. **INVITED**

Oral presentation: *Future Changes in the California Current Ecosystem.* National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara. March 2022. **INVITED.**

Oral presentation: *Future Changes in the California Current Ecosystem*. Banse Early Career Scientist Seminar Series, University of Washington. February 2022. **INVITED.**

Oral presentation: *Proyecciones climáticas de alta resolución para el afloramiento de la corriente de California.* Charlas informales rápidas de clima y oceanografía. University of Cadiz, Spain. January 2022. **INVITED.**

Oral presentation: *A dynamically downscaled ensemble of future projections for the California Current System.* Interdisciplinary Marine Science Seminar Series at the Virginia Institute of Marine Sciences. November 2020. **INVITED.**

Oral presentation: *Dynamically downscaled climate projections for the California Current Upwelling System.* EBUS webinar. June 2020. **INVITED.**

Oral presentation: *Dynamically downscaled climate projections for the California Current Upwelling System.* Ocean Sciences Meeting. San Diego, California, U.S. February 2020.

Oral presentation: *Future Changes of the coastal waters in the California Current System.* PICES 2019 Annual Meeting. Victoria, Canada. October 2019.

Oral presentation: *Forecasting California Current System Variability on Decadal to Centennial Timescales*. UC Santa Cruz, Ocean Sciences Seminars. May 2019. **INVITED.**

Oral presentation: *Subsurface Dynamics Leading to Decadal Predictability in the California Upwelling System.* 2018 PICES International Symposium: The Climate Change Effects on the World Oceans. Washington D.C, U.S. June 2018.

Oral presentation: *Subsurface Dynamics Leading to Decadal Predictability in Upwelling Systems of the North Pacific.* Ocean Sciences Meeting. Portland, Oregon, U.S. February 2018.

Oral presentation: *Exploring the Deterministic Dynamics of the Subsurface Anomalies in the North Pacific using an Ensemble Modeling Approach*. 64th Annual Eastern Pacific Ocean Conference, California, U.S. September 2017.

Oral presentation: *Natural vs. Anthropogenic controls on Coastal Hypoxia along the U.S. West Coast*. International Long-Term Ecological Research (ILTER) Network 1st Open Science Meeting. Kruger National Park, South Africa. October 2016.

Oral presentation: *Deterministic Dynamics of the North Pacific Ocean Subsurface Anomalies: a Physical Basis for Decadal Predictability.* 63rd Annual Eastern Pacific Ocean Conference, Oregon, U.S. September 2016.

Poster presentation: *Decadal predictability of hypoxia along the U.S. West Coast.* Poster presentation. Ocean Sciences Meeting. New Orleans, Louisiana, U.S. February 2016.

Oral presentation: *The Warm BLOB: generation, propagation and persistence dynamics between 2013-2015*. 62nd Annual Eastern Pacific Ocean Conference, California, U.S. September 2015.

Oral presentation: *Decadal prediction of hypoxia along the U.S. West Coast.* ASLO Aquatic Sciences Meeting. Granada, Spain. February 2015.

Oral presentation: *Decadal prediction of hypoxia along the U.S. West Coast. 61st* Annual Eastern Pacific Ocean Conference. Oregon, U.S. September 2014.

Poster presentation: *Subsurface Ocean Climate Variability and controls on Northeast Pacific Upwelling.* Ocean Sciences Meeting. Hawaii, U.S. February 2014.

Poster presentation: *Using a Regional Ocean Model to simulate the Mediterranean Outflow Water Spreading in the Gulf of Cadiz*. Poster presentation. Marine Sciences International Symposium. Cadiz, Spain. February 2012.

HONORS, AWARDS, FELLOWSHIPS

NOAA National Marine Fisheries Service 2021 Team member of the year award. For exemplary leadership and research productivity in support of the NOAA Fisheries National Climate Science Strategy.

Future Earth and Global Young Academy Early Career Fund Fellowship to virtually attend the Sustainability Research & Innovation Congress 2021 (SRI2021), June 2021

Inclusive Inquiry STEM Education Certificate. Institute for Scientist and Engineer Educators. University of California, Santa Cruz, September 2019

Summer School Fellowship granted by ICTP-CLIVAR to attend Summer School on Oceanic Eastern Boundary Upwelling Systems. Trieste, Italy. July 2019

Fellowship granted by US CLIVAR to attend the Large Ensemble Workshop. Topic: “Fostering usage of large initial-condition ensembles with Earth System Models”. Boulder, Colorado. July 2019

Travel Fellowship granted by the Mentoring Physical Oceanography Women to Increase Retention (MPOWIR) to attend Pattullo Conference. Virginia. October 2017.

Travel Fellowship granted by California Current Ecosystem LTER to attend International Long-Term Ecological Research Network 1st Open Science Meeting. Kruger National Park, South Africa. October 2016.

Summer School Fellowship, granted by Jet Propulsion Laboratory (JPL) Center for Climate Sciences at California Institute of Technology, Keck Institute for Space Studies. Topic: "Using Satellite Observations to Advance Climate Models". August 2016.

Advanced Level Teaching Certificate. Center for Teaching and Learning, Georgia Institute of Technology. Spring 2016.

Mobility Fellowship for Researchers, for short research stays in Georgia Institute of Technology, Atlanta, Georgia, U.S., granted by the Ministry of Education, Culture, and Sport, Spanish Government. Fall 2010 and 2011.

Ph.D. fellowship, by the Ministry of Education and Culture Spanish Government. 2009-2012.

Fellowship for Master’s Degree Studies, granted by the Ministry of Education, Culture, and Sport, Spanish Government. 2008-2009.

Collaboration fellowship granted by Vice-Chancellor of Research, Technology Development and Innovation of the University of Cadiz to participate in a R&D project directed by Dr. Ignacio Hernández Carrero. 2006

Scholarship for Undergraduate Studies, granted by Ministry of Education and Science, Spanish Government. 2001-2002, 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008

TEACHING & MENTORING EXPERIENCE

Postdoctoral Supervising and Mentoring, *University of California Santa Cruz* 2020 - 2023

- Nathalí Cordero-Quirós. Guidance on conducting and analyzing Lagrangian particles experiments

Participant in the Professional Development Program: Leadership Institute 2 2023
Institute for Scientist and Engineer Educators, University of California Santa Cruz

- Equity and inclusion discussions and designing STEM practices, rubrics, and professional skills for future Professional Development Programs

Participant in the Equity-Minded Mentoring Workshop, *Center for Innovations in Teaching and Learning, University of California Santa Cruz* Summer 2021

- Identified and planned to implement concrete mentoring strategies with an "equity mindset" to support the success of mentees from backgrounds traditionally excluded from STEM.
- Developed a personal mentoring philosophy and identified tools to foster inclusive mentoring relationships.

Participant in the Professional Development Program, *Institute for Scientist and Engineer Educators, University of California Santa Cruz* 2019

- Led, designed, created, and taught a climate variability 2 day-workshop for incoming transfer students at UCSC

Participant in the Professional Development Program, *Institute for Scientist and Engineer Educators, University of California Santa Cruz* 2018

- Designed, created, and taught isotope proxy 2 day-workshop for incoming transfer students at UCSC

Graduate Teaching Assistant, *School of Earth & Atmospheric Sciences, Georgia Tech* Fall 2017

- Advance Environmental Data Analysis. Graduate course. Graded lab reports and exams. Tutoring.

Course Instructor, *Center for Academic Enrichment, Georgia Tech*. Fall 2017

- First-Year Seminar (Section *Earth & Atmospheric Sciences*).
- First-Year Seminar (General Section). Assisted first-year students in transitioning successfully to Georgia Tech: study strategies, time management skills and learning strengths, resume and cover letter.

Undergraduate Mentoring, *Georgia Tech*

- Matt Barr, independent undergraduate project. Guided calculation and mapped of water properties along isopycnals using CESM and CMPI5 models Fall 2016
- Aishwarya Joshi, independent undergraduate project. Argo data extraction. Interpolation of data to isopycnals layers. Guided calculation and mapped of water properties along isopycnals. Summer 2016

Teaching Practicum, *Georgia Tech*
Introduction to Oceanography. Guest Instructor.

- Designed and delivered six lessons: Heat Balance, Bathymetry, Seawater properties, Waves, Equatorial Circulation, and Fisheries. Prepared lesson material, homework, and questions for exams. Fall 2015

Graduate Teaching Assistant, *Georgia Tech*
Introduction to Environmental Science.

- Undergraduate course. Laboratory Instructor.
- Led tutorial lessons. Graded lab reports and exams. Tutoring. Spring 2014

FIELD EXPERIENCE

"*Economic Exclusive Zone of Spain 2006*". (R/V Hespérides, 17 days). September 2006
Evaluation of the acoustic backscatter data recorded by multibeam sonar system.

"*ARSA 0306*". (R/V Cornide de Saavedra, 15 days). Biological and size sampling of March 2006
demersal fish species. Statistical analysis of the sampling.

LEADERSHIP

Member of CLIVAR working group: *Climate Data and Predictions for Coastal Solutions*

Session Primary Chair: *Physical and biogeochemical variability and changes in World's Upwelling Systems: Present and Future.* Ocean Sciences Meeting. February 2024

Session Co-chair: *Mind the gap - Understanding and Predicting Future Coastal Ocean Climates*. Ocean Sciences Meeting. February 2024

Session Co-chair: *Generating regional ocean forecasts and projections: best practices and tools.* 69th Eastern Pacific Ocean Conference. September 2023

Dissertation committee member. Thesis: *Estudio de la evolución del clima futuro en la region del Mediterráneo con un modelo climático regionalmente acoplado*. Dr. Ivan Parras Berrocal. 2023

Session Primary Chair: *Physical and Biogeochemical Changes in World's EBUS: Present and Future, at* the Eastern Boundary Upwelling Systems Conference. Lima, Peru, September 2022

Session Primary Chair: *Eastern Boundary Upwelling Systems: present and future changes and their impacts on marine ecosystems* at the Ocean Sciences Meeting 2022

Session Primary Chair*: Water Mass Variability in Eastern Boundary Upwelling Systems: Climate Drivers and Ecosystem Impac*t at the Ocean Sciences Meeting 2020

Co-Organizer of the 66th Eastern Pacific Ocean conference 2019 in Lake Tahoe, California

Session Co-chair: *Trends in the eastern North Pacific Ocean: beyond interannual variability* at 65th Eastern Pacific Ocean Conference 2018

Reviewer for AGU: GRL and JGR - Oceans, Ocean Modeling, and Frontiers

Mentoring Physical Oceanography Women to Increase Retention (MPOWIR), member since 2016

Hands-on activities on the 4th Annual Latino College and STEM Fair (Gatech, Spring 2016).

Guest Speaker, Earth Systems theme in Radloff Middle School (Fall 2016).

Graduate Student Representative for student government GEAS (Gatech, 2015-2016)

SKILLS

Modeling experience: Regional Ocean Modelling System

Programming Languages: MatLAB, Fortran, Unix shell, CDO

Statistical and Geographic Information Systems software: R, SPSS, ArcGIS

Language: fluent in English and Spanish (native)