Angelica R. Rodriguez

CONTACT INFORMATION

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EDUCATION

University of California San Diego

Ph.D., Oceanography — 2019
Physical Oceanography Curricular Group

M.S., Oceanography — 2014
Physical Oceanography Curricular Group

B.S., Physics with Specialization in Earth Science — 2013
Minor: Environmental Systems

PROFESSIONAL APPOINTMENTS

Research scientist (2022-Present), Jet Propulsion Laboratory, California Institute of Technology.

Oceanographic scientist (2021-2022), Naval Information Warfare Center Pacific.

Lecturer and Postdoctoral Scholar (2019-2021), Scripps Institution of Oceanography, UC San Diego.
Project: Enhancement of wave and flood forecasting, flood risk assessment, and monitoring of San Diego Bay
Advisor: Mark Merrifield
Project: The Scripps Institution of Oceanography Geosciences Education and Opportunities (Scripps-GEO) Program
Advisor: Jane Teranes
Project: Interaction between plumes and surface waves from the surf zone to the inner-shelf
Advisor: Sarah Giddings

FELLOWSHIPS, GRANTS, AND SCHOLARSHIPS

Oceanids Memorial Fellowship — 2018
Naval Research Enterprise Internship — 2017
Carl Storm Underrepresented Minority Fellowship to attend the Gordon Research Conference on Coastal Ocean Modeling — 2015
National Center for Atmospheric Research Large Allocation Recipient — 2015
Environment Blasker-Miah-Rose Grant for Climate Change Research through the San Diego Foundation with the co-applicant Sarah Giddings — 2015
National Science Foundation Fellowship — 2013
San Diego Fellowship — 2013
Woods Hole Oceanographic Institution Summer Fellowship — 2012
Scripps Undergraduate Research Fellowship — 2011
TOS/ASLO/AGU 2012 Ocean Sciences Meeting REU to Meeting Student Award — 2011
Chula Vista Women's Club Scholarship — 2008

PROFESSIONAL PREPARATION

Graduate Student Researcher (2013-2019), Scripps Institution of Oceanography.
Project: Buoyancy transport mechanisms at continental shelf, surf zone, and estuarine scales
Advisor: Sarah Giddings

Naval Research Enterprise Intern (2017), Space and Naval Warfare Systems Command - Systems Center Pacific.

Project: San Diego Bay circulation experiment
Mentors: Suzanne Graham and Jessica Bredvik
Research Assistant (2011-2013), Scripps Institution of Oceanography.
Project: An oceanic heat transport pathway to the Amundsen Sea Embayment
Advisor: Sarah Gille
Undergraduate Research Fellow (2012), Woods Hole Oceanographic Institution.
Project: Eddy heat flux along isopycnals in the Amundsen Sea (Southern Ocean)
Advisor: Kurt Polzin
Undergraduate Research Fellow (2011), Scripps Institution of Oceanography.
Project: Oceanic heat sources near Pine Island Glacier
Advisor: Sarah Gille

JOURNAL PUBLICATIONS

Bresnahan, P., Briggs, E., Davis, B., Rodriguez, A. R., Renner, N., Merrifield, M. A. (2022). A low-cost, DIY ultrasonic water level sensor. Accepted to *Oceanography*.

Rodriguez, A. R., Giddings, S. N., and Kumar, N. (2018). Impacts of nearshore wave-current interaction on transport and mixing of small-scale buoyant plumes. *Geophysical Research Letters*, 45, 8379–8389. https://doi.org/10.1029/2018GL078328.

Rodriguez, A. R., Mazloff, M. R., and Gille, S. T. (2016). An oceanic heat transport pathway to the Amundsen Sea Embayment, *Journal of Geophysical Research: Oceans*, 121, 3337–3349. doi: 10.1002/2015JC011402.

HIGHER EDUCATION TEACHING

Instructor of Record (Winter 2020) UCSD Environmental Systems 102: The Solid and Fluid Earth.

Instructor of Record (Fall 2019) UCSD Climate Change Studies 102: Research Perspectives on Climate Change.

Guest Lecturer (Spring 2018), UCSD Scripps Institution of Oceanography 205: Estuarine and Coastal Processes.

SERVICE, INFORMAL TEACHING, AND OUTREACH

Environmental Systems Program Advisory Committee Member (2019-2020), Scripps Institution of Oceanography.

Editorial and Publications Committee Member (2017-2019), Scripps Institution of Oceanography.

Collaborator (2017), ONR sponsored grant, "Creating, Scaling and Sustaining NGSS-Aligned, ONR-Informed Research in High School Science Classrooms."

Workshop Organizer (2012, 2015, and 2016), Expanding Your Horizons Conference**.**

Invited speaker (2015), U.S. Navy's Southwest Regional Maintenance Center Women's History Month Event.

Invited Speaker (2014), SIO Summer Undergraduate Research Fellowship Research Symposium.

SIO Student Representative (2014), Society for Advancement of Hispanics/Chicanos and Native Americans in Science National Conference.

Assistant Instructor (2011-2012), Ocean Discovery Institute.

Association for Women in Science Outreach Committee Member (2011-2012), San Diego, California Chapter.

CONFERENCE AND SEMINAR PRESENTATIONS*

Rodriguez, A., M. A. Merrifield, 2021. Resilient Futures: San Diego Bay. Ocean Visions Coastal Solutions Workshop: Coastal Flood Modeling, Prediction and Observations for the U.S. West Coast. Recorded Talk.

Rodriguez, A., 2020. Estuarine-nearshore interactions in a changing climate. Banse Oceanography Seminar Series at the University of Washington School of Oceanography. Virtual Talk.

Rodriguez, A., S. N. Giddings, S. Graham, J. Bredvik, 2019. Lateral circulation in a low-inflow, seasonally inverse estuary. Ocean Sciences Meeting, San Diego, California. Poster.

Rodriguez, A., S. N. Giddings, S. Graham, J. Bredvik, 2018. Lateral circulation in a low-inflow, seasonally hypersaline estuary. Ocean Sciences Meeting, Portland, Oregon. Talk.

Rodriguez, A., S. N. Giddings, N. Kumar, 2017. Assessing the influence of surface gravity waves on small-scale, buoyant coastal outflows. Coastal and Estuarine Research Federation, Providence, Rhode Island. Talk.

Rodriguez, A., S. N. Giddings, N. Kumar, 2017. Wave-current interaction impacts on small Kelvin number freshwater plumes. Gordon Research Conference on Coastal Ocean Dynamics, Biddeford, Maine. Poster.

Rodriguez, A., 2017. Summertime circulation in San Diego Bay. NOAA Southwest Fisheries Science Center MMTD Science and Issues Seminar, San Diego, California. Talk.

Rodriguez, A., 2017. San Diego Bay Circulation Experiment. SPAWAR NREIP Poster Session, San Diego, California. Poster.

Rodriguez, A., S. N. Giddings, and N. Kumar, 2015. Assessing the impact of wave forcing on small river plumes. Coastal and Estuarine Research Federation, Portland, Oregon. Poster.

Gilroy, A., S. N. Giddings, and N. Kumar, 2015. Assessing the impact of wave forcing on small river plumes using the COAWST Modeling System. Gordon Research Seminar and Conference on Coastal Ocean Modeling, Maine. Poster.

Gilroy, A., M. Mazloff, and S. Gille, 2014. An Oceanic Heat Transport Pathway to the Amundsen Sea Embayment. West Antarctic Ice Sheet Workshop, Julian, California. Talk.

Mazloff, M., **A. Gilroy**, and S. Gille, 2014. Oceanic heat sources to Pine Island Bay (PIB). AGU Fall Meeting, San Francisco, California. Talk.

Gilroy, A. and K. Polzin, 2012. Ocean Heat Sources Near Pine Island Glacier. WHOI Physical Oceanography Department Seminar, Woods Hole, California. Talk.

Gilroy, A., S. Gille, and M. Mazloff, 2012. Oceanic Heat Sources Near Pine Island Glacier. UCSD 2012 Undergraduate Research Conference, UCSD, San Diego, California. Talk.

Gille, S., **A. Gilroy**, et al., 2012. Warming in the Southern Ocean: Assessing the impact of eddies and meandering fronts. European Geosciences Union General Assembly, Vienna, Austria. Talk.

Gilroy, A., S. Gille, and M. Mazloff, 2012. Oceanic Heat Sources Near Pine Island Glacier. Antarctica, Ocean Sciences Meeting, Salt Lake City, Utah. Poster.

Gilroy, A., S. Gille, and M. Mazloff, 2011. Oceanic Heat Sources Near Pine Island Glacier. UCSD 2011 Summer Research Conference, UCSD, San Diego, California. Talk.

* Last name changed from Gilroy to Rodriguez in 2015

SELECT ADDITIONAL EMPLOYMENT

Chief Scientist's Team Member on the 2013 North Pacific Repeat Hydrography Cruise (May 2013), *U.S. Global Ocean Carbon and Repeat Hydrography Program***.**
Operated the CTD and rosette bottle system both on deck and in the lab, drew and documented water samples, and worked on data quality control and analysis alongside the chief scientist, Sabine Mecking, and co-chief scientist, Gunnar Voet.

Ocean Science Explorers Intern (Sept.-Dec. 2012), *Ocean Discovery Institute*.
Severed as an assistant instructor and conducted a research project: "Recommendations for a New Environmental Behavior Impact Assessment Plan for the Ocean Discovery Institute's Ocean Science Explorers Program."