

Alejandra Sanchez-Rios

PHYSICAL OCEANOGRAPHER · PH.D

☎ (+1) 541-602-3142 | ✉ srale42@ntu.edu.tw | 🏠 www.alesanchezrios.com | 📺 [alesss42](#) | 🐦 [@Ales42](#)

Education

COLLEGE OF EARTH, OCEAN, & ATMOSPHERIC SCIENCES (CEOAS), OREGON STATE UNIVERSITY.

Corvallis, OR, USA

PH.D. IN OCEANOGRAPHY

Jun, 2011 - Feb. 2019

- Department of Physical Oceanography
- *Dissertation Title:* "The Role of Submesoscale Features in Transporting Heat and Salt Across Ocean Fronts"
- *Advisor:* Kipp Shearman
- *Relevant Courses in Physical Oceanography:* Turbulence; Data Analysis; Geophysical Fluid Dynamics
- *Relevant Courses in Social Justice and Education:* The Inclusive Classroom; Race, Gender, and Health Justice; Theories of Teaching and Learning

UNIVERSIDAD AUTÓNOMA DE BAJA CALIFORNIA

Ensenada, BC, Mexico

BACHELOR OF SCIENCE IN OCEANOGRAPHY, CONCENTRATION IN PHYSICAL OCEANOGRAPHY

Sept. 2005 - Oct. 2009

Research Experience

INSTITUTE OF OCEANOGRAPHY AT NATIONAL TAIWAN UNIVERSITY

Taipei City, Taiwan

POST-DOCTORAL RESEARCHER

Jun. 2019 - PRESENT

- Analyzed the stability at ocean fronts, considering the effect of topography
- Investigated the dynamics of ambient water surrounding a buoyant coastal current using ROMS output.

OREGON STATE UNIVERSITY

Corvallis, OR, USA

GRADUATE RESEARCH AND TEACHING ASSISTANT

Jul. 2011 - Feb. 2019

- Investigated the role of small-scaled features at ocean fronts in the overall transport of heat and salt across major ocean currents
- Quantified mixing rates and analyzed water modification processes at the edge of ocean fronts
- Piloted Autonomous Underwater Vehicles (AUV), and collected and processed data
- Participated in month-long Oceanographic cruises where my responsibilities were piloting underwater gliders and mentoring undergraduate student volunteers in the group.

CENTRO DE INVESTIGACIÓN CIENTÍFICA Y EDUCACIÓN SUPERIOR DE ENSENADA (CICESE)

Ensenada, BC, Mexico

RESEARCH ASSISTANT

Dec. 2009 - Mar. 2011

- Assisted with data analysis of current profilers time series of basin circulation
- Participated in one month long oceanographic cruises where my responsibilities were maintenance and data management of 200 m to 2000 m long buoys.

WOODS HOLE OCEANOGRAPHIC INSTITUTE (WHOI)

Woods Hole, MA, USA

SUMMER STUDENT FELLOW

Jun. 2010 - Sep. 2010

- Described the physical processes affecting Diamond Shoal evolution, NC.
- 12 week summer internship
- *Advisors:* John Warner.

Projects

UNPACKING DIVERSITY DISCUSSION SERIES

Corvallis, OR, USA

CO-FOUNDER

Jun. 2017 - PRESENT

- Co-founded an initiative within the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University, that addresses the obstacles that self-identified people of color face in academia using targeted workshops and seminars
- Each year the steering committee selects a topic to focus on, e.g., Race in Higher Education, Accessibility to Higher Education, and Current Climate in Earth Sciences.

STEMWOW SUMMER CAMP

University of San Diego, CA

FACILITATOR

Jan. 2018 - Aug. 2019

- Participated in an NSF-founded project led by the University of San Diego faculty who designed a free science summer camp for middle school students from Chula Vista Hispanic community.
- Led groups of 5-6 students through a 2-week program where they designed science projects, were educated on jobs in STEM field, and learned about their cultural heritage.
- The implementation of the summer camp classes was done under a social justice framework. Students' enrollment to this camp was not merit-based.

Professional Development

Social Justice Education Initiative

Oregon State University

STUDENT AND VOLUNTEER

Sep. 2017-Dec. 2019

- Participated in a series of workshops that help facilitate conversation about equity and inclusivity in higher education
- Example of the workshops: A Deeper Look at Micro-aggression; Creating Equitable Teaching and Learning Environments

Dean Search Committee

Oregon State University

GRADUATE STUDENT REPRESENTATIVE

Sep. 2016 to Jun. 2017

- Served as graduate student representative for the Dean search committee in 2016

Graduate Students Committee

CEOAS

CHAIR

Sep. 2013 - Jun. 2014

- Represented graduate students' interests to the college leadership
- Helped coordinate student social activities and guidance for first-year graduate students

Coalition of Graduate Employees (CGE)

Oregon State University

CEOAS STEWARD

Sep. 2016 - Jun. 2018

- CEOAS representative in the OSU Graduate student union
- Helped mediate student grievances and collaborated with other departments for better working conditions.

Field Experience

Selected Field work experiences

SCIENCE CREW, GLIDER DEPLOYMENT ASSISTANCE

- R/V SALLY RIDE, California coast (October 2018). CASPAR ONR project.
- R/V ROGER REVELLE, Taiwan coast (Feb. 2017, Feb. 2014 & May 2013). Circulation and Intrusion of Kuroshio current South of Taiwan
- R/V ATLANTIC EXPLORER, Virginia coast (Oct. 2015). CASPER ONR experiment
- R/V KNORR, Virginia coast (Oct. 2014). CASPER ONR experiment

PRINCIPAL INVESTIGATOR, STUDENT CRUISE

- R/V OCEANUS. Oregon coast (Apr. 2014). Oxidation rates in Perpetua Marine Reserve

Publications & Presentations

Publications

PEER-REVIEW

- Sanchez-Rios, A., K. Shearman, E. D'Asaro, C. Lee, and J. Klymak (2020) **Observations of Cross-frontal Exchange Associated with Submesoscale Features Along the North Wall of the Gulf Stream**, *Deep Sea Research Part I: Oceanographic Research Papers*, 103342.
- Gonzalo, S. Saldias, R. Kipp Shearman, A. Sanchez-Rios, and R. Letelier **Seaglider observations reveal dominant cross-shore scales of variability in the oxygen minimum zone northern Chile**, *Manuscript submitted for publication*.
- Sanchez-Rios, A., K. Shearman, E. Shroyer, L. St Laurent, L. Craig, A. Lucas, and H. L. Simmons, **Characterization of Interleaving at the Edge of a Kuroshio Intrusion**, *Manuscript in preparation*
- Treviño-Peña, M., A. Sanchez-Rios, and M. McCracken, **Creating a community that addresses issues of race, diversity and social justice within Academia: A Collaborative Autoethnography**, *Manuscript in preparation*

Selected Presentations

CONFERENCES

- **Ambient Water Circulation Near a River Discharge: Investigating the Formation of a Topographic β -Plume.** *Ocean Sciences 2020*. A. Sanchez-Rios, M. McCracken, M. Treviño-Peña, J. Waite, A.Chan, T. B. Truong, J. A. T. K. Wong-Ala, and C. Liam Cosgrove
- **Creating Spaces to Unpack Diversity in Physical Sciences: The CEOAS of a Professional Learning Community.** *Ocean Sciences 2020*. Sanchez-Rios A., S. Chen, J. Chang, and S. Kida
- **Coordinated Surveys Using Slocum Gliders and Free-floating Drifters for Tracking Frontal Features.** *Talk, 8th EGO Meeting and International Glider Workshop, Rutgers, May 2019*. Sanchez-Rios A., R. Kipp Shearman, Emily Shroyer, Lou St. Laurent, Craig Lee , Harper Simmons, Andre Lucas and Sen Jan
- **Observations of interleaving features along the Kuroshio Branch Current in the South China Sea.** *Ocean sciences, 2018*. Sanchez-Rios, A., R. Kipp Shearman, Emily Shroyer, Louis St Laurent, Craig Lee, Andrew Lucas and Harper L Simmons
- **Submesoscale features at Gulf Stream North Wall and their impact on heat and salt transport during the LatMix survey winter 2012.** *Poster, Liege colloquium, 2016*. Sanchez-Rios, A., Kipp Shearman, Jody M. Klymak, Craig Lee, Eric D'Asaro and Jonathan Gula

INVITED TALKS

- **Mixing at the Edge of the Kuroshio Branch Current in the South China Sea.** *Universidad Autonoma de Baja California, Feb 2020*. Sanchez-Rios, A.
- **Mixing Characterization at the Edge of the Kuroshio Branch Current in the South China Sea.** . *University of Washington, March 2018*. Sanchez-Rios, A.

Honors & Awards

- | | | |
|------|--|---------------------------|
| 2018 | Clara L. Simerville Award , Recognition for creative contributions to international understanding on campus and/or in the community | <i>Corvallis, OR, USA</i> |
| 2017 | Honorable Mention , Ford Foundation Fellowships | <i>USA</i> |
| 2014 | Women's Center Student Leader Award , Oregon State University | <i>Corvallis, OR, USA</i> |
| 2011 | Diversity Advancement Pipeline Fellowship , Oregon State University | <i>Corvallis, OR, USA</i> |

Skills

- Programming** MATLAB, ROMS, LaTeX,
Languages Spanish (fluent), English(Fluent), Chinese (beginner)

Organizations

PHYSICAL OCEANOGRAPHY

- American Geophysical Union (AGU). *Since 2011*
- Geolatinas Unidas. *Since 2019*
- Mentoring Physical Oceanography Women to Increase Retention (MPOWIR). *Since 2016*

EDUCATION

- Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) *Since 2012*
- 500 Women Scientists *Since 2017*