

CHRISTINA L. WIEDERWOHL (*she/her*)
Department of Oceanography, Texas A&M University
3146 TAMU, College Station, TX 77843
chrissyw@tamu.edu

EDUCATION

Doctor of Philosophy in Oceanography, Dec. 2012

Texas A&M University, College Station, TX USA

Concentration: Physical Oceanography

Dissertation Title: The Ross Sea response to evolving ocean-ice interactions in a changing climate.

Chair: Dr. Alejandro H. Orsi

Master of Science in Oceanography, May 2006

Texas A&M University, College Station, TX USA

Concentration: Physical Oceanography

Thesis Title: A new account of Ross Sea waters: Characteristics, volumetrics, and variability.

Chairs: Dr. Alejandro H. Orsi and Dr. Achim Stoessel

Bachelor of Science in Marine Science, *magna cum laude*, Dec. 2002

Coastal Carolina University, Conway, SC USA

Minors: Chemistry, Biology

PROFESSIONAL APPOINTMENTS

2018 – present	<i>Instructional Associate Professor, Oceanography, TAMU</i>
2022 – present	<i>Associate Department Head, Oceanography, TAMU</i>
2018 – 2022	<i>Asst. Dept. Head for Engagement and Graduate Affairs, Oceanography</i>
2013 –2018	<i>Instructional Assistant Professor, Oceanography, TAMU</i>
2012 –2013	<i>Postdoctoral Research Associate, Oceanography, TAMU</i>
2004 –2012	<i>Graduate Research Assistant, Oceanography, TAMU</i>
2003 –2010	<i>Graduate Teaching Assistant (5 semesters), Oceanography, TAMU</i>

FUNDED GRANTS and PROJECTS

I. Guneralp (lead-PI) and **C.L. Wiederwohl (lead-PI)**. The TAMU eNGAGE Gulf Scholars Program: Next Generation of Advocates for the Gulf Ecosystem. *National Academy of Sciences – Gulf of Mexico Research Program*. \$624,997 (direct costs); Sept 2023 – Aug. 2028.

A. Alsante (graduate student PI), **C.L. Wiederwohl (faculty lead)**. A comparative study of STEM virtual learning in high education. *Texas A&M Center for the Integration of Research, Teaching, and Learning (CIRTL) Teaching as Research Program*; (in kind supported project for Alsante Teaching as Research Graduate Fellowship); Aug. 2021-Aug. 2022.

BS Twining (Lead PI, Bigelow), JN Fitzsimmons (Co-PI), G. Cutter (Co-PI, ODU), **C.L. Wiederwohl (Co-PI)**. Collaborative research: Management and implementation of the US GEOTRACES GP17 Section: South Pacific and Southern Ocean (GP17-OCE). *NSF-OCE 2023206*, \$1,951,183 (\$502,824 TAMU portion); Oct 2020 – Sept 2024.

C.L. Wiederwohl (Lead PI), K. Shamberger (co-PI), and S. Yvon-Lewis (co-PI) Gulf Coast Stewards of Tomorrow: Working Towards a Sustainable Future Through At-Sea Learning for South Texas Middle and High School Students; *Environmental Protection Agency-Gulf of Mexico Program Grant # 12461398*; \$149,852; May 2017 – April 2023.

C.L. Wiederwohl (PI) Core curriculum technology enhancement grant for OCNG 252; Texas A&M University; \$62,777; 2016-2019

PUBLICATIONS and PRODUCTS

Peer Reviewed Publications

Orsi, A.H. and **Wiederwohl, C.L.** (2009). A recount of Ross Sea waters. *Journal of Deep-Sea Research Part II* (56), 778-795.

eBooks

Wiederwohl, C.L. (2015). Oceanography 252 Laboratory Manual. Provided for free via TAMU learning management system.

Technical Reports

Wiederwohl, C.L. and Orsi, A.H. (2010). ERS mooring deployment cruise: Atmosphere-Ice-Ocean interactions in the Eastern Ross Sea expedition aboard Oden in the south Pacific Ocean Feb.-Mar. 2010. Cruise Report: TAMU Reference 10-02-T.

Orsi, A.H., **Wiederwohl, C.L.**, Walpert, J., Reta, R., Pisoni, J.P., Schreiner, K.M., Puigdefabregas, J. (2009). Antarctic Crossroad of Slope Streams: Expedition aboard the B.O. Puerto Deseado in the Southwest Atlantic Feb.-Mar 2009. Cruise Report: TAMU Reference 09-01-T.

Virtual Labs

Wiederwohl, C.L. and McCall, M. (2018). Interactive gaming virtual laboratory course for *Introduction to Oceanography*.

COURSES TAUGHT AT TAMU

OCNG 443 – Oceanography Field and Laboratory Methods – Spring semesters 2020-2023

OCNG 456/656 (was 489/689) – MATLAB Programming Laboratory for Ocean Sciences - Fall 2015 - Fall 2016*, Fall 2017-Fall 2019, Fall semesters 2020-2023.

OCNG 251 – Oceanography - Fall 2013, Fall 2014-Spring 2016 (classroom); Fall 2016 (online); Fall 2017 (classroom); Spring semesters 2018-2019, Fall semesters 2018-2023 (classroom major's section)

OCNG 101 – Succeeding in Oceanography – Fall semesters 2022-2023

OCNG 252 – Oceanography Lab (Honors section) -Spring 2014, Fall 2014- Fall 2015

GEOS 401/601 – Earth's Polar Regions: Science, Society, and Discovery - Spring 2014*

*indicates semesters where course was co-taught

SERVICE AND LEADERSHIP POSITIONS

Non-TAMU

- UNOLS: University representative** 2022 - present
UNOLS provides a primary forum through which the ocean research and education community, research facility operators and the supporting Federal agencies work cooperatively to improve access, scheduling, operation, and capabilities of current and future academic oceanographic facilities.
- TAMU Department of Oceanography**
- Associate Department Head** 2022 - present
Graduate and Undergraduate Director for the Department of Oceanography
- Assistant Department Head for Engagement and Graduate Affairs** 2018-2022
Graduate Director for the Department of Oceanography graduate programs; oversee all outreach and community engagement
- Instructional Assistant Professor Search Committee – member** 2018 - 2019
Search committee for the hire of an Instructional Assistant Professor to oversee graduate distance learning courses offered by the Department of Oceanography.
- Graduate Learning Community – co-organizer** 2016-present
Professional development workshop series for all department of Oceanography graduate students.
- Visiting Assistant Professor Search Committee – member** 2016
Search committee for the hire of the Department of Oceanography’s first visiting assistant professor with a focus on ocean observing.
- Outreach Coordinator** 2015-present
Develop outreach activities for numerous venues including K-12 events and campus family events. Train graduates and undergraduates volunteering at events on activities.
- Recruiting and Admission Committee (RAC) – chair** 2014-present
Committee duties include recruiting at the graduate and undergraduate level; review of applications for admissions M.S., Ph.D., and M.O.S.T. degree programs; competitively awarding all departmental scholarships for new and continuing students
- Executive Committee – member** 2014-present
Committee comprised of all departmental committee chairs. Committee duties include selection of departmental graduate and undergraduate excellence awards; review of departmental SOPs.
- Curriculum Committee – member** 2013-present
Committee duties include review of all new course proposals; administration of the qualifying exam
- Teaching Assistant Supervisor** 2013-present
Supervise all Graduate Teaching Assistants and Graduate Lecturers; Serve as instructor of record for all laboratory sections taught by a TA; facilitate payroll and supplies pertaining to the labs
- TAMU College of Arts and Sciences**
- Graduate Instructional Committee – member** 2022 - present
Committee comprised of all graduate directors and academic advisors. Committee duties include review of all graduate course proposals from the college; awarding of the University Merit Fellowship; review and decimation of information pertaining to graduate programs.

Undergraduate Curriculum Committee – member 2022 - present
 Committee comprised of all undergraduate directors and academic advisors. Committee duties include review of all undergraduate course proposals from the college; review and decimation of information pertaining to undergraduate programs.

Faculty Advisory Council - APT – member 2022 - present
 Committee is voice of APT faculty to college leadership. Duties include giving feedback on policies and procedures including promotion and review college-level awards.

Enhancing Undergraduate Student Success Committee – member 2022 - present
 Committee shares best practices, discusses metrics and develops strategies for reducing undergraduate student achievement disparities.

TAMU College of Geosciences

Graduate and Undergraduate Scholarship Committee – member 2016-2022
 Committee reviews and awards scholarships to new and continuing undergraduate and graduate students.

Graduate Instructional Committee – member 2015-2022
 Committee comprised of all graduate directors and academic advisors. Committee duties include review of all graduate course proposals from the college; awarding of the University Merit Fellowship; review and decimation of information pertaining to graduate programs.

Undergraduate Recruitment Committee – member 2015-2022
 Committee works closely with the College Director of Recruitment to staff recruiting events

Texas A&M University

Center for Teaching Excellence (CTE) Faculty and Student Advisory Board 2023- present
 College of Arts and Sciences faculty representative to provide input on CTE information and resources.

Graduate Mentoring Advisory Group – member 2021 – 2022
 Group reviews draft documents to guide future directions of the Graduate and Professional School in institutionalizing a culture of excellence in mentoring for graduate and professional students across TAMU.

UniCAS Steering Committee – member 2019 - 2022
 Committee gives feedback on Graduate Admissions portal being built for TAMU.

TAMU OCEAN student organization – faculty advisor 2018 - present
 Serve as faculty advisor for the official undergraduate student group for TAMU Oceanography majors.

GRS Steering Committee – member 2016-2019
 Committee is tasked with testing and improving the new graduate admission system (GRS) that handles all materials submitted by prospective graduate students.

OUTREACH ACTIVITIES

International Youth Adventure Program Summer Camp 2023
 Oceanography faculty lead for a one-week summer camp in the Dominican Republic for high school students interested in in Life and Environmental Science.

Youth Adventure Program Summer Camp 2022

One-week residential summer camp for high school students interested in Geosciences. Taught students aboard the RV Trident about oceanographic topics, as well as exposed them to hands on data collection.

Aggie STEM Summer Camp 2020-2022

Residential summer camp for middle and high school students interested in pursuing a STEM undergraduate degree. Teach 2 week-long mini course covering various Oceanographic topics and hands-on experiments. (2020 was virtual due to COVID-19)

Under the Sea Camp 2018 – 2022

Developed a weeklong summer camp for elementary school children to promote summer learning and interest in oceanography. Campers do daily hands-on exercises with TAMU Oceanography faculty. Summer 2020: developed a virtual camp due to COVID-19 with daily hands-on activities using household items. Camp was administered through BandApp so campers could interact with me and fellow campers.

Geoscience Exploration Summer Program (GeoX) 2015 – 2021

Residential summer camp for high school student interesting in majoring in a Geoscience at TAMU. Teach several 2-hour hands-on oceanographic sessions. Take all campers out on the RV Trident to experience at-sea data collection. (2020-21 was virtual due to COVID-19)

South Texas ISD 2017 – 2019

Half-day hands-on mini oceanography course for high school students from South Texas ISD. Teachers bring underserved and underrepresented students from the Texas Valley to TAMU to encourage them to pursue a college degree.

MENTORING

PhD students

Yerim Kim – committee member (2022-present)

MS students

Natalie Zielinski - committee member- special appointment (2013-2016)

Benjamin Morgan - peer mentoring (2008-2011)

Master of Geoscience students (non-thesis degree)

Calli Gray – chair – (2020- present)

Stephanie Koenig – committee member (2017-2020)

Master of Ocean Science and Technology students (committee chair non-thesis degree)

J. Morales (2022- present); A. Krueger (2021-present); M. Akers (2022-2023); C. Jackson (2020-2022); R. Joseph (2020-2022); A. Lawrence (2020-2022); J. Satterfield (2020-2022); C. Ramirez (2020-2022); B. Skinner (2020-2022); L. Belobrajdic (2018-2021); S. Polis (2018-2020); G. Marzolf (2018-2020); J. Marble (2018-2019); S. Truesdale (2018-2019); L. Travis (2018-2019); S. Hall (2017-2019); E. Jiminez (2017-2019); B. Cervera (2017-2019); A. McClenny (2017-2018); J. Dedrick (2017-2019); Z. Cares (2017-2019); J. Wilson (2017-2018); J. Grotte (2017-2018); C. Keith (2017-2018); B. Barker (2016-2018); K. Grover (2016-2018); P. Carrillo (2016-2017); L. Ferris (2015-2017); E. Lewis (2015-2017)

Undergraduate Research students

Madison Stein, B.A. Ocean Studies student (Summer 2023 – present)

Norely Faz, B.S. Oceanography student (Summer 2022 – Spring 2023)

Charles Larrouilh, B.S. Oceanography student (Fall 2021 – Spring 2022)

Christopher Crain, B.S. Oceanography student (Summer 2021)
Charlotte Miller, B.S. Oceanography student (Spring 2020)
Ana Ramos, B.S. Oceanography student (Spring 2020)
Genevieve Genest, B.S. Environmental Geosciences student (2011-2012)
Melanie Thornton, B.S. Environmental Geosciences student (2010-2011)

FIELD EXPERIENCE

GoM GRADients Cruise (July 12-15, 2022; July 30- August 4, 2023) – Chief Scientist - graduate student training cruise aboard the R/V Point Sur in the Gulf of Mexico. Led pre-cruise planning, oversaw hydrographic data collection including CTD and bottle data, and completed all post cruise data QA/QC. The cruise was designed to train graduate student on oceanographic sample collection aboard a vessel and leading science at sea.

Schade Cruise (May 23 – 26, 2019; June 1 - 4, 2021; May 23-27, 2022; May 29-June 2, 2023) – Chief Scientist for the Schade Scholars expedition aboard the R/V Point Sur in the Gulf of Mexico. Led pre-cruise planning, oversaw hydrographic data collection including CTD and bottle data, and completed all post cruise data QA/QC. The cruise was designed to train undergraduates on oceanographic sample collection aboard a vessel.

REU Cruise (June 12-14, 2022) – Faculty support for the TAMU REU student training cruise aboard the R/V Pelican in the Gulf of Mexico. Assisted chief and co-chief scientists in hydrographic data collection including CTD and bottle data.

Galveston Bay Field Trips (1-day cruises; 4 per year: 2018-present) – Chief Scientist for field trips aboard the RV Trident in Galveston Bay. Cruises are at-sea training for Oceanography undergraduate students to learn sample and data collection in the field for introductory oceanography classes, and undergraduate field method classes.

OSO2010 (Feb. 5 – March 12, 2010) - Physical Oceanography component leader for the Atmosphere-Ice-Ocean interactions in the Eastern Ross Sea expedition aboard the Swedish Icebreaker Oden in the South Pacific Ocean. Coordinated all CTD/LADCP/XBT hydrographic work aboard the Oden, and deployed 3 deep subsurface moorings in the Eastern Ross Sea/Amundsen Sea. Collected/processed salinity samples and collected samples for $\delta^{18}\text{O}$ analysis.

ACROSS (Feb. 14 – March 12, 2009) - Watch Leader for the Antarctic CrossRoads of Slope Streams expedition aboard the Argentine BO Puerto Deseado in the South Scotia Sea. Oversaw all CTD/LADCP/XBT hydrographic work and surface drifter deployments during the midnight to noon watch, as well as assisted with the deployment of 3 deep subsurface moorings.

P18 (Jan. 21 – Feb. 23, 2008) - CTD operator for the CLIVAR/Carbon Repeat Hydrography Program P18 leg 2 aboard the NOAA RV Ronald H. Brown in the southwest Pacific Ocean. Operated the CTD console, collected/processed dissolved oxygen samples and salinity samples, and deployed surface drifters and ARGO floats.

AnSlope (Jan. 28 - Feb. 16, 2005) – Graduate Student for the Cross-slope exchanges at the Antarctic Slope Front mooring recovery expedition aboard the RVIB Nathaniel B. Palmer in the

Ross Sea (Southern Ocean). Assisted with the recovery of 5 deep subsurface moorings, as well as retrieval and pre-processing of data from all moored instruments.

Mechanisms Controlling Hypoxia (Sept. 27-29, 2003; April 2-8, June 25 -July 1, Aug. 20-27, 2004) – Graduate Student for the hydrographic survey expeditions aboard the RV Gyre in the Gulf of Mexico. Collected various samples including dissolved oxygen, salinity, DIC, DOC, and nutrients.

Environmental Quality Lab; Coastal Carolina University Department of Marine Science (2001- 2002) – Student Researcher

Collected and processed nutrient samples from swashes in the Myrtle Beach, SC area.

Discovery Bay Marine Lab; University of West Indies (2002) – Student Researcher.

Conducted research on the Mangrove productivity of Discovery Bay, Jamaica.

PROFESSIONAL PRESENTATIONS AND CONVENED SESSIONS

- E. Masferrer Dodas and C.L. Wiederwohl (July 2023). *Lessons Learned in Communicating Geochemistry to Non-Scientific Audiences*. Goldschmidt2023. Lyon, France (session chairs).
- C.L. Wiederwohl, R. Bogdanoff, A. Thomas, J.N. Fitzsimmons, B. Twining and G. Cutter (July 2023). *Reimagining oceanographic biogeochemistry: bringing the ocean to the community through virtual reality*. Goldschmidt2023. Lyon, France (oral presentation).
- C.L. Wiederwohl (May 2020). *GP17-OCE Broader Impacts: “Sailing with GeoTraces” Virtual Reality*. GP17-OCE Planning meeting. Virtual meeting (oral presentation).
- C.L. Wiederwohl and J.M. McCall. (April 2018). *Life and Physical Sciences Online: Engaging non-science majors through an interactive online Oceanography Lab*. Transformational Teaching and Learning Conference. Texas A&M University. College Station, TX (oral presentation).
- C.L. Wiederwohl and J.M. McCall. (April 2018). *Making Waves in OCNG 252 Virtual Labs*. Transformational Teaching and Learning Conference. Texas A&M University. College Station, TX (poster).
- C.L. Wiederwohl and A.H. Orsi. (Feb. 2012). *Assessing the influence of heat and freshwater anomalies on deep and bottom waters of the Ross Sea*. 2012 Ocean Sciences Meeting. Salt Lake City, UT (poster).
- C.L. Wiederwohl, B.P. Morgan and A.H. Orsi. (Dec. 2010). *Sea ice thickness variability in the Southern Ocean*. Fall American Geophysical Union Meeting. San Francisco, CA (poster).
- C.L. Wiederwohl, A.H. Orsi, G.C. Johnson and S.G. Purkey. (Dec. 2009). *Assessing the effect of Ross Sea source water mass variability on bottom waters offshore*. Fall American Geophysical Union Meeting. San Francisco, CA (poster).
- C.L. Wiederwohl and A.H. Orsi. (July 2008). *Multiyear variability of the Antarctic waters of the South Pacific Ocean*. Scientific Committee on Antarctic Research Open Science Conference. St. Petersburg, Russia (poster).
- C.L. Stover, A.H. Orsi, T. Whitworth III, A.L. Gordon, S.S. Jacobs, and M. Visbeck. (Oct. 2005). *Characteristics of the Antarctic Slope Front in the Ross Sea*. Conference on the Oceanography of the Ross Sea. Venice, Italy (poster).

- C.L. Stover**, N. Bartz, and S. Libes. (Nov. 2002). *Eutrophication assessment of swashes in the Grand Strand area, SC*. American Chemical Society Regional Meeting. Charleston, SC. (poster).
- N. Bartz, **C.L. Stover**, and S. Libes. (Nov. 2002). *Long-term trends in water quality of the swashes and surf zone in the Grand Strand Area, SC*. American Chemical Society Regional Meeting. Charleston, SC. (poster).
- C.L. Stover**, N. Bartz, and S. Libes. (Oct. 2002). *Eutrophication assessment of swashes in the Grand Strand area, SC*. Southeastern Ecological Research Society Meeting. Conway, SC. (poster).

PROFESSIONAL DEVELOPMENT

- Leadership Development Program**; Texas A&M University, August 2018 (Participant)
Workshop facilitated by North American Training and Development on best leadership practices.
- Earth Educators Rendezvous**; University of Wisconsin, July 2016 (Participant)
Workshop focuses on Geoscience education and modern classroom practices.
- Mentoring Professional-Track Faculty in Teaching**; Texas A&M University Dean of Faculties Mentoring Workshop Series, February 2016 (panelist). Selected to be a panelist to give perspective on teaching as academic professional track faculty.
- Women's Administrators Exchange Day**; Prairie View A&M University, June 2015 (participant).
Workshop focused on small group discussions of hot topics in higher education including bias in academia, Title IX, Promotion and Tenure.
- Best Practices for Preparing Two-year College Students for a Geoscience Career and Transfer Workshop**; University of Texas, June 2013 (panelist)
Supporting and Advancing Geoscience Education in Two-year Colleges (SAGE 2YC)
- Roadmap for a Successful Academic Career Workshop**; ADVANCE Center for Women Faculty; Texas A&M University, April 2013 (participant)
The Roadmap Workshop is designed for internal and external women Postdoctoral Researchers and Assistant Professors (3 years or less) in STEM fields.
- Mentoring Undergraduates in Research**; Texas A&M University, May 2011 (participant)
Workshop focuses on how to be a successful mentor to undergraduates in a research setting.
- Preparing for an Academic Career in the Geosciences**; University of Oklahoma, July 2008. (participant)
On the Cutting Edge, Professional Development Workshop for Geoscience Faculty.

HONOR AND AWARDS

Faculty Excellence Award, College of Arts and Sciences – TAMU	2023
Provost Academic Professional Track Teaching Excellence Award – TAMU	2022
College of Geosciences Innovative Educator Award – TAMU	2021
AFS* College Level Distinguished Achievement Award for Teaching – TAMU	2019

Dean's Distinguished Achievement Award for Faculty Teaching – <i>TAMU</i>	2017
Pipes Endowed Fellowship – <i>TAMU</i>	2011
Scientific Committee on Antarctic Research IPY Travel Grant – SCAR	2008
Scherck Endowed Fellowship – <i>TAMU</i>	2007- 2009
Geosciences Graduate Scholarship– <i>TAMU</i>	2003-2004
Coastal Scholars Scholarship – <i>CCU</i>	1999-2002
Phi Theta Kappa Honor Society	1999
Recipient of the President's Scholarship – <i>Northwest State Community College</i>	1998-1999

* Association of Former Students