



CONNECTIONS

Linking EEO, Diversity and Science

Issue #35: Student Edition

EEO/Diversity Newsletter for NOAA Research

JULY 2017

Student Interns Share their Work Experiences

Every summer, OAR or “NOAA Research” provides opportunities for student interns to experience firsthand the research conducted at OAR. This year is no different. Please take a moment to read their stories and learn about their experiences and the meaningful work that they are doing alongside our scientists. As reflected in their stories, they all value the mission of NOAA. Thanks to all the [OAR laboratories and program offices](#) who contributed articles to this Special Student Edition of our EEO Newsletter.

NSSL - Bringing Social Sciences into Forecasting

Shadya Sanders, a doctoral student from Howard University, has been an intern at NSSL for the past two years. She has assisted with the evaluation of the Probabilistic Hazard Information (PHI) tool at the Hazardous Weather Testbed (HWT). Shadya has focused on Emergency Managers and how they make decisions in response to severe weather such as tornadoes and floods, and how PHI can be used as a support tool for different communities. The HWT activities bring social sciences into forecasting and communicating uncertainty, of interest to Shadya.

Shadya earned a degree in Interdisciplinary Earth and Atmospheric Sciences from Purdue University with a minor in Spanish. She enjoys reading, learning other languages, health and fitness, and is a personal trainer and group exercise instructor.



Photo: NSSL intern, Shadya Sanders

Currently enrolled in atmospheric sciences, her research involves working with sociologists, psychologists, and communication researchers at Howard University. Shadya first learned about HWT at the 2014 NOAA [EPP/MSI](#) Biennial Education and Science Forum. Her work in the HWT has been an exciting opportunity to combine aspects of atmospheric and social sciences. She said, “I absolutely know I am going in the right direction by studying both atmospheric sciences and sociology.”

After completion of her dissertation, Shadya hopes to follow a research career, starting with a post-doc, exploring probabilistic ensemble forecasting and how different populations react to it, or by looking at different communities and their responses to environmental changes (air quality, climate change impacts). She is interested in a career with NOAA, if there will be opportunities for multi-disciplinary and interdisciplinary collaborations and research. “NOAA has a very broad reach, and its mission always goes towards helping people, so there is always a way to contribute and help, even if it did not initially seem possible.”

STUDENT INTERNS SHARE MEANINGFUL WORK EXPERIENCES AT OAR

AOML - Evaluating Coral Bleaching and Improving the Understanding of Tropical Cyclones

Andrea Gomez is from Folsom, CA. She attended the University of California Santa Cruz where she received a BS in Marine Biology. She received her Master's in Biology at The City College of New York (CUNY) and is now finishing her second year in a PhD program in Earth and Environmental Sciences at CUNY. Growing up in northern California, Andrea has always been intrigued by the ocean. She is an avid SCUBA diver, and some of her fondest memories involve diving the kelp forests in Monterey. Andrea began studying corals when she moved to New York.



Photo: AOML Intern, Andrea Gomez

Andrea is working in the Ocean Chemistry and Ecosystems Division at AOML under Dr. Jim Hendee. Her research focus is on evaluating coral bleaching in south Florida and Puerto Rico by comparing in situ and satellite-based seawater temperatures and light levels. What excites Andrea most about this internship is the opportunity to conduct fieldwork, and familiarize herself with Atlantic and Caribbean coral species. The internship also allows Andrea to improve her scientific outreach and communication skills.

The [NOAA-CREST](#) internship is Andrea's third internship opportunity with NOAA. In the past, she worked at the [NCCOS Center for Coastal Environmental Health and Biomolecular Research](#), and the Hollings Marine Lab, in Charleston, SC, where she conducted experiments to assess the reflectance and fluorescent signatures of coral. Andrea has also worked at NOAA's Center for Weather and Climate Prediction, where she interned with Coral Reef Watch.

All of Andrea's internship experiences with NOAA have been very beneficial to enhancing her knowledge of coral ecology. She would love to continue working for NOAA, is honored to be a part of the federal scientific community, and praises the excellence of NOAA's coral conservation programs.

Emily Paltz is from St. Helena, NE. She attends the University of Nebraska working to earn her BS in Meteorology and Climatology. Emily loves being in nature, and her hobbies include hiking, kayaking, biking, reading, and puzzles.



Photo: AOML Intern, Emily Paltz

Emily became interested in weather during elementary school, when she attended "Aqua Fest," a program for 5th graders that promotes the importance of water-related careers. After listening to a meteorologist talk about his job and its benefit to the public, Emily was inspired. In high school, she expanded her interest through an opportunity to shadow a forecaster with the National Weather Service.

She is working in the Hurricane Research Division (HRD) at AOML under Drs. Rob Rogers and Leon Nguyen. She is analyzing data collected by thousands of dropsondes released from NOAA's Hurricane Hunter aircraft since 1996. Her research focus is on improving HRD's understanding of how tropical cyclones are negatively affected by environmental vertical wind shear.

What excites her most about her internship are the opportunities for growth and how it has challenged her to think critically. She is improving on her programming skills, learning new coding languages, and enhancing her understanding of tropical meteorology. It has also allowed her to strengthen her interpersonal skills and scientific communication skills. Emily's career goals involve combining her interest in meteorology and climatology with sociology and psychology. Considering a career with NOAA has always been on her mind, and her internship at AOML has strengthened that desire. She is extremely grateful for the Hollings Scholarship program and strongly recommends it to future science students. "It is a very unique and immersive experience, and gives you the opportunity to meet some of the top minds in your field."

STUDENT INTERNS SHARE MEANINGFUL WORK EXPERIENCES AT OAR

GLERL - Collaborating with Scientists for the Environment

My name is **Roberto Villegas-Diaz**, and I am from Costa Rica. I did my undergraduate studies at the University of Costa Rica (UCR)



Photo: GLERL Intern, Roberto Villegas-Diaz

majoring in Business Computing. I also studied Physics for two years before moving to South Dakota to pursue my Master's degree in Computer Science. I got a scholarship from the Costa Rica-United States of America, CRUSA, Foundation. While I was still an undergraduate student, I worked at the Center for Geophysical Research (CIGEFI-UCR) in the analysis of Coupled Model Intercomparison Project Phase 5 data and satellite images processing for the detection of Mesoscale Convective Systems.

At GLERL, I am going to be working under Dr. Philip Chu's supervision in the Integrated Physical and Ecological Modeling and Forecasting (IPEMF) branch. I will be collaborating on different projects. I found this internship opportunity at the NCCOS website. Since my current University, South Dakota State, is not a partner with NOAA, I am self-funding my

internship. This is a great opportunity to make contact with a lot of scientists from diverse fields. I hope to start working on my Master's thesis using the Weather Research and Forecast model and parallel computing paradigms to do satellite data validation.

In my free time, I like to watch movies and Japanese anime, ride my bike, read, and go jogging. I just ran my first 5k race, Color Run, which is "the happiest 5k on the planet."

Hello, my name is **Char'Mane Robinson**, and I was born and raised in Sacramento, CA. My concern for the environment motivated me to attend California State Monterey Bay (CSUMB), where I am a McNair



Photo: GLERL Intern, Char'Mane Robinson

Scholar. I will be receiving a BS in Environmental Science with an emphasis in Natural Resources from CSUMB. While a full-time student, I also work part-time and serve as an active participant on campus and in the local community.

Last year, I received a scholarship

from NOAA EPP/MSI. The program supports underrepresented minority students to conduct two summer research internships under the mentorship of NOAA scientists. For my first summer research internship, I worked in Silver Spring, MD, analyzing polychlorinated biphenyls (PCBs) in the fish species from Cocos Lagoon, Guam. At the end of my internship, I was able to gain an understanding of marine fish biology and fishery management. Also, I won first place in the California State Universities Research Competition (CSURC) for the work I did on Cocos Lagoon.

For my internship this summer, I am working with Drs. Ed Rutherford and Doran Mason at GLERL on modeling Asian Carp growth potential in Lake Michigan. This research experience will help me develop a better understanding of how to use advanced software to make models that predict future environmental conditions which can be used to inform management strategies for invasive species like Asian carp.

As a NOAA EPP/MSI scholar, I have been able to hone my communication skills in working and collaborating with other scientists as well as educating the public about environmental issues. I believe that my two summer research experiences will further help me achieve my career goals through the development of enhanced academic discipline and professionalism needed for success as a future NOAA employee.

To learn more, please view my e-portfolio Link: <https://charmanerobinson.wordpress.com/>

STUDENT INTERNS SHARE MEANINGFUL WORK EXPERIENCES AT OAR

NOAA's Ocean Acidification Program (OAP) - Diving into New Waters

Catherine Pollack can't count the number of times she has dove into a pool. Whether at her university swim team's meets or during her many summers lifeguarding and teaching children how to strengthen their free-style strokes. But this summer she's diving into something new - the nexus of science and policy.



Photo: NOAA Ocean Acidification Program Intern Catherine Pollack (right) and Middlebury swim teammate enjoying team training in the Florida Keys.

Her intrigue in this interface was instilled during a four week course taught by NOAA's OAP Director, Libby Jewett, at Middlebury College during her freshman year. During the month, Catherine and her classmates explored topics ranging from fisheries management to ocean acidification. After this experience, she knew she wanted to do everything she could to spend a summer learning more about the inner workings of management and policy. As luck would have it, Middlebury College partners with NOAA to offer internship opportunities. Admittedly, Catherine hesitated at first because many of the positions were research focused. "But then I saw that there were opportunities in science policy and communication, one of which was with the NOAA Ocean Acidification Program," Catherine said.

She started her position with the OAP in June and is working on a variety of projects focused around communication. This is in part because of the diverse skills she has gained by majoring in Environmental Policy and in English. She has been translating research and communicating about capacity building efforts digitally, visually, and in written reports.

federal agencies play in environmental and science policy," she said. "I would recommend opportunities at NOAA to other students because it provides a view into how interconnected the worlds of scientific research, policy, and communication are. Before coming to NOAA, I wasn't sure how interested I was in the research side of things, but after just a few weeks, I have seen how critical it is to have a foundational understanding of the science in order to be an effective communicator and policy maker."

So where will she go from here? Catherine is very interested in communicating and translating information for policy makers. Although she already has a better sense of where she might contribute in her career, she plans on continuing to gain real world experience until finding where she best fits in the environmental policy puzzle.

We wish you the best Catherine!

"Now I have a much better understanding of the role



Photo: NOAA OAP Intern, Catherine Pollack

GFDL - Learning About Climate Variability and Precipitation in the Great Plains

NOAA-GFDL is hosting several student interns this summer, including two Hollings scholars, and seven Princeton University Cooperative Institute for Climate Science (CICS) interns, two of whom are profiled below.

Katie Boaggio just graduated from The College of New Jersey, majoring in physics with a minor in math. She became interested in atmospheric science through working with her undergrad advisor, researching cirrus cloud microphysics. In the fall she will be starting grad school studying atmospheric science at North Carolina State University, where she plans to focus on upper atmospheric dynamics.



Photo: GFDL Intern, Katie Boaggio

Katie is a New Jersey native, and learned about the CICS internship from her adviser. Katie's summer internship project at GFDL involves examining the statistics of extra-tropical cyclone tracks in models and observations, under the supervision of GFDL scientist Shannon Rees.

While she has long been interested in weather and forecasting, at GFDL she has been interested to learn about research that connects climate variability with impacts on weather, such as extra tropical cyclones. Katie has also enjoyed finding out what work at a government lab entails, and would definitely recommend anyone thinking about working at a NOAA lab try an internship first.

Daniel Lloveras is a rising senior at the University of Miami, majoring in Meteorology and Applied Math. He has been interested in meteorology from an early age, experiencing several extreme weather events during his Florida childhood.



Photo: GFDL Intern, Daniel Lloveras

He heard about the CICS internship through his undergraduate office, and his project at GFDL concerns the precipitation in the Great Plains and its relationship to the lower level jet, using the GFDL model FLOR, supervised by GFDL scientist Xiaosong Yang.

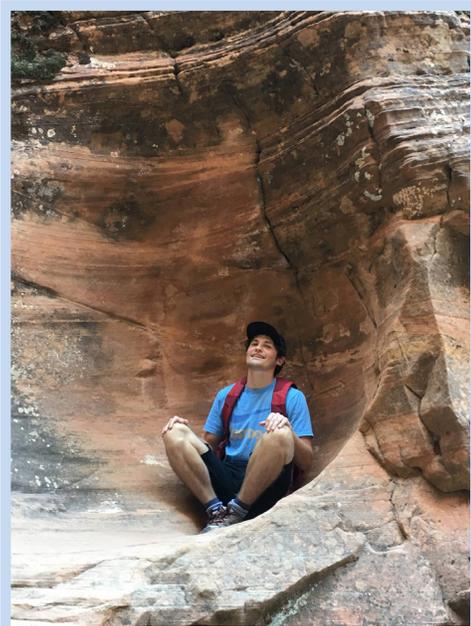
Daniel has found the internship to be an awesome learning experience, broadening his horizons beyond the research available at his home institution, and giving him an understanding of the collaborative teamwork involved in NOAA research. He is planning to apply to grad school next year and beyond that would be very interested in working in a NOAA lab or for another federal agency.

STUDENT INTERNS SHARE MEANINGFUL WORK EXPERIENCES AT OAR

PMEL - An Inside Look at a Science Agency

This summer, PMEL is hosting 9 undergraduate students through NOAA's Ernest F. Hollings Scholarship program, NOAA's College-Supported Internship Program at Smith College, the National Science Foundations' Research Experience for Undergraduates, and the University of Washington's Joint Institute for the Study of the Atmosphere and Ocean (JISAO) internship program. This year's cohort are: Will Christian from Michigan Technological University, Tina Chen from Middlebury College, Max Garvue from University of Nebraska - Lincoln, Nick Barber from Drexel University, Danielle Naiman from the University of California - San Diego, Gabby Kalbach from California State University - Monterey Bay, Sophie Shapiro and Courcelle Stark from Smith College, Emily van Auken from Stonehill College.

They are working across multiple groups at PMEL: Acoustics, Earth Ocean Interactions, Atmospheric Chemistry, Ocean Acidification, Madden-Julian Oscillation (MJO), and Large Scale Ocean Physics. Read about Max and Emily below. You can read about all the students on the [PMEL website](#).



Max Garvue is from the rural town of Amherst, NE. He is a rising senior at the University of Nebraska – Lincoln studying geology. His hobbies include listening to music, reading and enjoying the outdoors.

My internship focuses on analyzing hydro acoustic data and ROV video from 2009 of the then

erupting submarine volcanic vents located in the Lau Basin near American Samoa. This research is particularly exciting as relatively little work has been done on the subject.

Photo: PMEL Intern, Max Garvue

To help increase our understanding of the interworking mechanisms that go into submarine volcanic activity is an absolute dream to me, not to mention volcanoes are like earth's natural fireworks! What's not to like? I am also very anxious to be participating in a 10-day scientific research cruise about 200 miles off the Oregon coast to assist in work being done on the submarine volcano Axial Seamount. Funny enough, I had first thought of interning at the Hatfield Marine Science Center after I had read about the cutting edge work being done on Axial Seamount here through NOAA's website. From this internship, I hope to gain experience working with data and a full-fledged research crew. I also hope to gain some insight on the type of work I would like to pursue in the future!

I would absolutely recommend opportunities at NOAA to other students. These people are excited about science, and it is rejuvenating to be in an environment with so much passion. Everyone wants everyone else to succeed and the work is continuing to increase our knowledge on the earth and its inhabitants every day.



Emily Van Auken is an Environmental Science Major at Stonehill College in Easton, MA originally from Ormond Beach, FL. She is passionate about climate change, fantasy novels/movies/TV, and music.

This summer I am working with the Atmospheric

Photo: PMEL Intern, Emily Van Auken

Chemistry Group here at PMEL assessing trends in aerosol chemical composition at Barrow, AK. I am very excited to get to be a part of real climate change research. I had never heard of the NOAA Hollings Scholarship Program until my academic advisor suggested that I apply, but I

STUDENT INTERNS SHARE MEANINGFUL EXPERIENCES AT OAR

PMEL Interns (continued from page 6)

am so happy she did. I am very excited and grateful for this opportunity! I am hoping that I leave this internship having learned a lot, gained new skills, and made connections with students and scientists from across the country.

My current program at Stonehill is a broad look at Environmental Science as a whole, so I am hoping to pursue a graduate program in a more specified field (although I haven't narrowed that down yet!). My greatest passion is studying and communicating climate change, so I am working to determine a career path that allows me to be a leader and an active player in combating the climate crisis.

After my experience at NOAA, I would definitely consider a career with a Federal agency. I find NOAA's mission and the services it provides to the nation so important, and working as a part of the government appears to be a highly valuable use of scientific expertise. The NOAA Hollings Scholarship was a life changing opportunity for me, and I would highly recommend it to other students. It provides an inside look at not only a scientific agency, but also a Federal agency, and gives students first hand research experience that is invaluable to a science education.

ESRL/Global Monitoring Division (GMD) - Beta-testing New Software for Science on a Sphere

Joanna Pullen is a junior at the University of Northern Colorado and is concurrently pursuing undergraduate degrees in Meteorology and Secondary Earth Science Education. She grew up in New Jersey, but has spent the last five years in Colorado. Joanna has always had a passion for teaching science - especially anything related to the atmosphere.



Photo: GMD Intern, Joanna Pullen

This summer Joanna is working with the ESRL Global Monitoring Division's Observatory Operations Group. She is blending her love of science and education to create a public outreach tool and school teaching aid using the large, portable flat screen Science on a Sphere Explorer (SOSx) platform.

Joanna is beta-testing new software from the Science on a Sphere office that creates self-guided 'tours' on SOSx. When completed, the tour on the ESRL lobby SOSx will include information to teach visitors about GMD's mission and let them engage with datasets that correspond with GMD's research portfolio.

Science on a Sphere also released a version of SOSx that can be downloaded and used at schools as an educational tool. Joanna is also developing a similar classroom activity geared toward middle school students that will highlight datasets that help to explain GMD's mission of monitoring the Earth's atmospheric composition.

In her free time, Joanna enjoys hiking, snowboarding, reading, traveling, and sharing her love for science.

STUDENT INTERNS SHARE MEANINGFUL WORK EXPERIENCES AT OAR

ESRL/Global Systems Division (GSD) – Furthering the Public Understanding of NOAA



Photo: ESRL/GSD Intern, Peter Brechner

Peter Brechner is from Kirkland, WA and attends the University of Washington in Seattle where he is double majoring in Meteorology and Climatology. During his spare time he likes to see his friends and watch comedy shows. For his internship with the GSD, Peter will explore the Weather Archive and Visualization Environment (WAVE) program code. He is very excited about viewing archives of weather data to improve weather forecasting. Peter heard about the internship from the National Weather Service in Seattle. He hopes to learn how NOAA predicts the weather and saves lives, and also gain experience that will look great on his resume.

Peter hopes to work for NOAA in the future by researching weather and climate change to improve forecasts and public understanding. He first became passionate about meteorology after seeing record-breaking rainfall in November 2006 followed by a windstorm the very next month that left him without power for six consecutive days. He finished in fourth place in the National WxChallenge weather competition against thousands of undergraduates, graduate students, and alumni from the last school year.



Photo: GSD Intern, Kenia Ramos

Kenia Ramos was born in Cuauhtemoc, Chihuahua, Mexico and currently lives in Boulder, CO. She is attending Front Range Community College (FRCC) and is majoring in Computer Engineering and Graphic Design. In her spare time she likes to read and to spend time with friends and family. At the beginning of her internship she worked in Graphic Support and now is working for the GSD on the social media and outreach side of NOAA ESRL.

Kenia is excited to meet new people and learn more about NOAA, especially how social media is used for something that seems so serious. She heard about the NOAA internship during her first tour of NOAA Boulder, and after volunteering at the Museum of Nature and Science for the Girls and Science Day. She hopes to better understand how social media is used to show the public what goes on in NOAA. She plans to stay at FRCC for two years and then transfer to Colorado Mesa University and major in Graphic Design and Computer Engineering.

Upcoming Outreach and Recruitment Opportunities

CALENDAR OF EVENTS –2017

EEO Special Emphasis Outreach/Recruitment Conferences and EEO/Diversity Related Cultural Training Opportunities

Date	Event/Conference	Location	For More Information:
July 17-20, 017	Federally Employed Women (FEW) National Training Program	New Orleans, LA	www.few.org
Aug. 21-24, 2017	Blacks In Government (BIG) National Training Conference	Atlantic City, NJ	www.bignet.org
Sept. 11-15, 2017	National Image, Inc. Training Program	Albuquerque, NM	www.national-image.org
Sept. 21-23, 2017	*American Indian Science & Engineering Society (AISES) National Conference	Denver, CO	www.aises.org
Oct. 4-7, 2017	National Indian Education Association (NIEA) Annual Convention	Orlando, FL	www.niea.org
Oct. 2017	MAES Latinos in Science & Engineering Annual Symposium and Career Fair	TBD	www.mymaes.org
Oct. 5-7, 2017	2017 Women of Color STEM Conference	Detroit, MI	http://www.ccgmag.com/wocitc/
Oct. 12-14, 2017	SASE (Society of Asian Scientists and Engineers)	Chicago, IL	http://www.saseconnect.org/
Oct. 15-20, 2017	National Congress of American Indians (NCAI) Annual Convention	Milwaukee, WI	www.ncai.org
Oct. 19-22, 2017	Great Minds in STEM (formerly HENAAC) 27 th Anniversary conference	Pasadena, CA	www.greatmindsinstem.org
Oct. 19-21, 2017	*SACNAS Devoted to Advancing Opportunities for Hispanics, Chicanos and Native Americans in Science National Conference	Salt Lake City, UT	www.sacnas.org
Oct. 26-28, 2017	Society of Women Engineers National Conference	Austin, TX	http://we17.swe.org/
Oct. 29-30, 2017	Hispanic Association of Colleges & Universities (HACU) Annual Conference	San Diego, CA	www.hacu.net
Oct. 30-Nov 3, 2017	National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBcche) National Conference	Raleigh, NC	www.nobcche.org
Nov. 1-5, 2017	Society of Hispanic Professional Engineers Conference (SHPE)	Kansas City, MO	www.shpe.org

**OAR confirmed participation. If there are other conferences that we should add to the list, please let us know by sending an email to Georgia Madrid, georgia.madrid@noaa.gov.*

NOAA Research EEO/Diversity Program Office

CONNECTIONS NEWSLETTER

Connections is published quarterly by the OAR EEO Office. The purpose is to share accomplishments and to link Diversity, EEO and Science within all of OAR laboratories and programs.

If you have any newsletter ideas, suggestions and stories, please email to Georgia Madrid
georgia.madrid@noaa.gov.



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ABOUT US

VISION OF EEO OFFICE: To assist the Agency in creating a diverse workforce that is inclusive and free of discriminatory and retaliatory actions.

EEO MISSION: To bring awareness to employees, applicants for employment and management about EEO through the following:

Empowerment: Consultation services to employees, managers and applicants for employment.

Exposure: Recruitment and outreach activities for short and long-term recruitment.

Education: Federal EEO Mandated training, Special Emphasis programs and *Connections* newsletter.

Evaluation: Monitor employment statistics to prepare reports for NOAA, DOC, EEOC and OPM.

Website:
www.eeo.oar.noaa.gov

KNOW YOUR RIGHTS

EEO COUNSELING:

Federal law prohibits discrimination based on race, color, religion, national origin, sex (including sexual harassment and pregnancy discrimination), age (40 years and over), physical or mental disability, including the provision of reasonable accommodations for qualified applicants and employees with disabilities or genetic information (GINA), gender identity, and retaliation for participating in activities protected by the civil rights statutes. In addition, NOAA prohibits discrimination based on sexual orientation.

Employees, NOAA Corps Officers, or applicants for employment with NOAA who believe that they have been discriminated or retaliated against may contact an EEO Counselor. The Counselor will attempt to resolve the matter and furnish information about filing a complaint of discrimination. To preserve your rights under the law, you must contact an EEO Counselor within 45 CALENDAR DAYS of the date of alleged discrimination.

To initiate EEO Counseling or for more information, contact:
Civil Rights Office, NOAA

Phone: (301) 713-0500 or 1-800-452-6728

Fax: 301-713-0983

Website: www.eeo.noaa.gov

ALTERNATIVE DISPUTE RESOLUTION:

NOAA's Alternative Dispute Resolution (ADR) Program provides mediation and other services and seeks early resolution.

Website: www.wfm.noaa.gov/adr/