AISES - Preparing the Next Generation of Indigenous STEM Talent

OAR’s participation at the AISES conference in Oklahoma City, OK October 4-6, 2018, was a huge success in reaching out to Native STEM talent. Employees staffed the exhibit booth, volunteered as science fair judges and presented. CIRES was also a sponsor of the Pre-College Poster Sessions. Oklahoma, considered “Native American Country” with 39 Tribes represented was an excellent venue to showcase NOAA in the area and NSSL took on the challenge to share its science and career opportunities.

At the Boeing STEM Day, Lans Rothfusz, NSSL Deputy Director, led the HotSeat Weather Warning Simulator Activity for middle school students. The students were very engaged in the activity, and many of the students kept going back to learn more. Lans said, “The STEM day was an incredible experience for me and the students (and teachers) who participated in the NOAA HotSeat simulation. I had the unique vantage point to see their faces as they worked on the simulation. I will never forget their concentration, concern, and fierce determination to do well. I issued severe weather warnings for much of my career and I could recognize that look in their eyes. These students really “get it,” and, if it were in my power, I would hire every one of them into NOAA today! The future is bright for NOAA if we can tap into the energy and talents of these wonderful young people.”

The NSSL session for college students, Choosing a Career in Severe Weather Research: What are the Options? was very interactive. The panelists included Pam Heinselman, Jami Boettcher, Sebastian Torres and Bob Rabin. Bob noted that the session generated many questions and discussions about weather observing systems, research on tornadoes and dissemination of flash flood warnings to tribal communities.

Other NOAA sessions included, Iñupiaq insights into weather: the value of traditional science by Bob Rabin, The Power of Indigenous
AISES 2018 National Conference (con’t)

Knowledges Moving From Collecting to Respectful Use by Dan Wildcat, Haskell, Suzanne Van Cooten, NWS and Bill Thomas, NOS, and Engaging Native American Students in Exploring the Ocean by Catalina Martinez and Susan Haynes, OER. NOAA’s Native scholars, Sabra Comet, Knauss Sea Grant Fellow, Annalise Guthrie, MSI/EPP, and Jackson Osborn, CIRES/PSD, all presented their research and shared their experiences working for NOAA. Roger Pulwarty, ESRL PSD Senior Scientist, received his Sequoyah Fellowship and Bob Rabin was recognized by AISES for serving on the AISES Local Planning Committee. Next year’s AISES conference will be in Milwaukee, WI October 12-14, 2019.

OAR and CIRES: A Joint Effort in Spreading the Word about Our Research

Dr. April Croxton, OAR Ecologist, partnered with Susan Sullivan, CIRES, to host a joint OAR-CIRES informational table at the National Association of Black Geoscientists (NABG) 37th Annual Technical Conference, September 5-8, in Houston, TX. The theme for this year’s conference was “Building Relationships that Strengthen Our Legacy.”

Over the three day conference, students participated in plenary and poster sessions, networking opportunities, and professional development workshops. This was OAR’s first year attending the conference and nearly 100 visitors stopped by the table to engage and learn about the research taking place within the labs and programs. As a result of this positive interaction, several students have been connected with OAR researchers for potential research opportunities. April said, “It was great to be able to connect the students with researchers that are currently conducting research in their areas of interest.”

The NABG was established in 1981 by a group of minority geoscientists in the Houston area interested in creating networking opportunities with other minority professionals, and has expanded to include informing students of career opportunities in the field of Geosciences.

Photo: Bob Rabin, NSSL, moderating the session, Choosing a Career in Severe Weather Research: What are the Options? He organized NSSL’s participation at AISES. Credit: Georgia Madrid

Photo: Jackson Osborn, CIRES/ESRL PSD presents his poster at AISES. Jackson was the past president of the AISES CU Denver chapter. Credit: Georgia Madrid

Photo: Roger Pulwarty proudly wears his AISES Sequoyah Medal. Credit: Barb Deluisi

Photo: Dr. April Croxton, OAR, talks to a student at the NABG conference. Credit: Susan Sullivan
National Hispanic Heritage Month

Telling Our Stories: Boulder County Latino History Project

By Lynn Daniel, NOAA/ESRL Director’s Office

Linda Arroyo-Holmstrom, a Colorado native, granddaughter of coal miners, and a self-identified Chicana, spoke about her family’s history at NOAA Boulder on September 20. Arroyo-Holmstrom was invited by the OAR/EEO Diversity Program Office and the Boulder Labs Diversity Council to commemorate National Hispanic Heritage Month.

“Our history is just as important as everyone else’s and it has been far too long that we have been overlooked,” Linda stated before talking about her family’s story. Both of Linda’s grandfathers were miners, so she named her presentation “Miners: My Family Story” and welcomed NOAA Boulder employees into her family’s history. “We’ve been here for generations,” she stated.

As she recounted to her audience, the story of Linda’s family is similar to the stories of many who came from Mexico to escape the Mexican Revolution in the early 1900s. Her paternal grandfather came to the U.S. in 1919. The other side of the family represents the migrant path; with deep roots going back to the 1600’s in the United States. Linda’s family worked its way up through New Mexico and to Colorado. Her father’s father emigrated to work one of the more than 100 active mines in southern Colorado. However, working in the mines required one to own their own tools. In a video interview that she shared, Linda’s grandfather explained how, at age 13, he was exposed to the brutal working conditions of coal mining.

Because coal mining was seasonal work, during the summers families would travel north to work the sugar beet fields and then return to the mines during the winter months. Even though conditions were tough, Linda said “they worked their hardest to make a better future for their children.”

Linda is very active in exploring Latino history in Colorado. She is a graduate of the University of Colorado Boulder with a bachelor’s degree in education and a master’s degree in multicultural foundation. After more than 30 years teaching in the Boulder Valley School District, Linda now works with the Boulder County Latino History Project. She has been an active member since its inception in 2013.

Linda ended her presentation by reflecting on a handful of memories from her childhood. She told the group that you never left the house unless you were clean and well dressed and that her family celebrated everyone’s birthday and honored their ancestors. Linda said that her family worked hard in the mines, the beet fields, and also to dispel stereotypes about Latinos. She finished by stating that her history is vital to understanding the area in which we live. Linda’s talk gave NOAA employees a better understanding of the Latino history of the area in which they live and work.

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“CREST” is actually NOAA’s Cooperative Science Center for Earth System Sciences and Remote Sensing Technologies. Affiliated with the City University of New York, CREST conducts research and educates and trains a diverse group of students, early career scientists, and engineers in NOAA-related science missions. The goal is to help create a diverse STEM workforce for NOAA and its contractors, academia, industries and the private sector.

To initiate new collaborations and strengthen existing ones, the Earth System Research Laboratory (ESRL) Physical Sciences Division (PSD) hosted a three-day meeting in Boulder, Colorado with representatives from CREST.

The meeting kicked off with overview presentations by ESRL and PSD Director Dr. Robert Webb, and by NOAA-CREST Assistant Director Dr. Shakila Merchant, followed by presentations by CREST scientists/students and PSD scientists. The CREST delegates also toured the ESRL divisions and learned about various ongoing NOAA mission-priority research projects.

Four CREST graduate students – Equisha Glenn, Jean Pierre Valle, David Melecio-Vasquez, and Aris Fernandez – showcased their research projects and discussed their upcoming plans of experiential and research training opportunities at ESRL. CREST and PSD experts then discussed existing research projects, which culminated in creation of short- and long-term collaborative research and education/training plans.

A luncheon meeting with the four ESRL division directors on the second day led to discussions about the existing and future scope of research and education collaborations across ESRL.

The final day of the meeting was dedicated to a demonstration of the NOAA National Water Model, and deliberations on future collaborations and engagement in areas of mutual interest such as drought, flooding, food, and snow, which tie into the NOAA renewed missions of Weather, Water and the Blue Economy.

“There is clearly a tremendous opportunity for collaboration between PSD and CREST, especially on the topic of water extremes.” said meeting organizer and PSD researcher Dr. Robert Cifelli.

A highlight of the meeting was identifying additional NOAA Experiential and Research Training Opportunities for graduate and postdoctoral students.

Plans to reconnect at the upcoming AGU and AMS meetings and initiate a monthly brown-bag series brought the meeting to an enthusiastic end!

This meeting set a path forward for ESRL and CREST to stay connected and meaningfully engage in advancing NOAA’s science, social science and education missions. Details on collaborative projects will be available on the PSD and CREST websites in the near future.
In our continuing efforts to create a more diverse scientific staff at ESRL, the Global Systems Division (GSD) visited a National Center for Atmospheric Sciences (NCAS) partner, the University of Texas – El Paso (UTEP), in November 2017. GSD employees, Kevin Kelleher, Jennifer Mahoney, and Melinda Marquis and Rich Lataitis, PSD, met with Dr. Rosa Fitzgerald of the UTEP physics department and a small group of student researchers. The students delivered presentations about their research to the ESRL staff, who – in turn – gave an overview of research opportunities actively pursued at ESRL. It was agreed that a follow-up meeting in Boulder would make sense to continue the search for overlapping research interests between the two institutions.

NCAS Director Dr. Vernon Morris, Dr. Fitzgerald and five UTEP students met with ESRL scientists and leaders in Boulder on July 25-26, 2018. The students included: Julio Ceniceros, Masters student in environmental science working with Dr. Jessie Creamean, ESRL CIRES scientist, to study Arctic aerosols and seawater; Miguel Cortez, Masters student in physics, studying electromagnetic scattering from irregularly shaped particles in the presence of humidity; Nakul Nitin Karle, Ph.D. student in environmental science and engineering, studying the planetary boundary layer and meteorological factors influencing the ozone near the Earth’s surface; Suhail Mahmud, Ph.D. student, studying air quality in the El Paso Del Norte Region; and Ashley Annette McAfee, a fourth-year undergraduate student in environmental science with a concentration in biology, studying the impacts on human health of aerosols in the El Paso Del Norte region.

On July 25, ESRL leaders delivered presentations about the science performed in each of the four divisions. Susan Sullivan, CIRES and Bonnie Strong, CIRA, explained the cooperative institutes and career opportunities provided to students at NOAA. After lunch, each student gave a presentation about their current research. A group dinner at Chez Thuy provided a relaxing chance for UTEP guests and ESRL hosts to get to know one another better.

On July 26, students participated in three breakout groups based on their research interests: Group A focused on radiation, aerosols, and cloud observations, Group B focused on computational science and numerical weather prediction and Group C focused on aerosols, chemistry, and physical processes. ESRL scientists led in-depth discussions and explained their research to the students. They also provided helpful recommendations to the students to advance their research projects. Students asked many questions about best practices and how ESRL scientists overcame research challenges. Dr. Christine Wiedinmyer, CIRES, and Sylvia Murphy, GSD, met with the students to discuss leadership, careers in science, and professional development.

The afternoon concluded with a tour of ESRL and a viewing of the Science on a Sphere. ESRL staff hope that one or more of the UTEP students will return to perform internships or post-docs at ESRL.
### EEO/Diversity Across OAR

#### Office of Weather and Air Quality (OWAQ)

Kandis Boyd, OWAQ Deputy Director, served as an evaluator of the oral presentations for the Class of 2018 Hollings Scholars and EPP/MSI Programs. Over 30 students presented their findings after participating in an 8-12 week internship at one of NOAA’s facilities. Kandis said, “It was an honor to be an evaluator. It was a great opportunity to see the emerging minds that we have. The projects that had to be completed in 8-12 weeks were impressive.” She recalled one student’s model to measure particulates in the atmosphere to be used in a P3 flight into a hurricane that the student also got the opportunity to fly into. She said she was in awe with the level of detail and expertise of the project and all the projects she reviewed.

#### Atlantic Oceanographic & Meteorological Laboratory (AOML)

AOML’s Diversity Inclusion and You (DIY) group hosted several events during the 4th quarter. The first was a viewing of the *Women of the NOAA Corps: Reflections of Sea and Sky* video and discussion with the producer, Timi Vann. The second was a Red, White, and Blue dessert event to welcome new AOML and CIMAS employees to the lab. Third, Sim Aberson was selected to participate in the NSF’s Hearts of Gold (Geoscience Opportunities for Leadership in Diversity) program. After that meeting, Sim presented a DIY Brownbag seminar where he shared insights gained from the NSF’s Hearts of Gold program.

#### Air Resources Laboratory (ARL)

Alice Crawford, Cooperative Institute for Climate & Satellites (CICS) – Maryland, and Glenn Rolph, Meteorologist for ARL HQ, served as poster evaluators for the Student Science and Education Symposium on August 2, 2018, at NOAA Headquarters in Silver Spring, MD. Over 100 students participated in this year’s event and provided either oral presentations or a poster for the work that they completed under the 2018 Ernest F. Hollings and EPP/MSI.

#### ESRL Chemical Sciences Division (CSD)

During the Atmospheric Tomography mission (Atom), while on location in Punta Arenas, Chile, Joshua “Shuka” Schwarz, Karen Rosenlof and Róisín Commane of Harvard University volunteered outreach time to a local high school, the María Auxiliadora School. They met for short talks with two different groups and their Spanish translator. Their presentations included slides to illustrate their instruments and measurements. They also allowed time for questions.
Climate Program Office (CPO)

CPO has included a requirement for Principal Investigators (PI) applying for grants to provide a description of diversity and inclusion activities within their institutions. Monika Kapacz, Sandy Lucas and Nancy Beller-Simms queried CPO program managers as to the discussions and influence the requirement had within the proposal review panels. They have written a report of their findings which they have shared with CPO. Wayne Higgins, CPO Director, has shared it with OAR management.

Geophysical Fluid Dynamics Laboratory (GFDL)

Jasmine John was panel co-organizer and panel member discussing, *Diversity & Inclusion in Modeling: A Community Conversation on Leadership, Diversity, Inclusion, and Belonging*, at the NOAA’s General Modeling Meeting and Fair, College Park, MD, on September 11.

NOAA Office of Ocean Exploration and Research (OER)

Catalina Martinez, OER Regional Program Manager, spent several months working with Kendall Moore, Associate Professor of URI’s Harrington School of Communication and Media on her documentary titled *Can we Talk? Difficult Conversations with Underrepresented People of Color: Sense of Belonging and Obstacles to STEM Fields*. Catalina set her up with several people from NOAA to interview, as well as colleagues from NSF and Howard University, all of whom are in the film. She worked with Dr. Moore and her student, Gyasi Alexander, to develop a workshop around the film, and submitted abstracts for the Annual SACNAS and AISES conferences, as well as AGU. The abstract was accepted at SACNAS and AGU. The film premiered to kick off the University of Rhode Island InclusiveSciComm symposium. Catalina said the facilitated discussion afterwards was powerful.

Pacific Marine Environmental Laboratory (PMEL)

On August 2, eighteen members of the Latino family support group from the Children’s Home Society of Washington visited NOAA’s Western Regional Center in Seattle, WA. The group wanted to learn about NOAA’s work, undergraduate internships, and career opportunities; to connect with Latino scientists and engineers; and to conduct hands-on restoration work. LT CDR Fuenmayor (NOAA Corps with PMEL), Dr. Ivonne Ortiz (JISAO), and Jason Lehto (NMFS Restoration Center) hosted short talks about their work and career paths. The talks were translated into Spanish. After the question and answer period, the group removed invasive blackberries from the shoreline and had a discussion about how to be stewards of the environment in their day-to-day lives.

Photo:  Group photo of the Children’s Home Society of Washington after conducting a restoration project on the NOAA Western Regional Center. Credit: Alicia Keefe, NOAA Fisheries West Coast Region
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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.

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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.

CONNECTIONS NEWSLETTER

Connections is published quarterly by the OAR EEO/Diversity Program Office. The purpose is to share accomplishments and to link Diversity, EEO and Science within all of the OAR laboratories and program offices. If you have any newsletter ideas, suggestions and stories to contribute, please email Georgia Madrid - georgia.madrid@noaa.gov.

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