CREST-FUNDED NOAA-EPP SCHOLAR & UTEP DOCTORAL STUDENT HELPS MAP PACIFIC OCEAN ABOARD NAUTILUS

Edited By Sarah Garcia, NOAA-CREST Communications Manager

In October 2018 - From Oct. 4 through 18, 2018, Stephen Escarzaga, a NOAA CREST Scholar and an environmental science and engineering doctoral student from the University of Texas at El Paso (UTEP), helped conduct seafloor mapping surveys of the Clarion-Clipperton Fracture Zone from San Francisco to Honolulu, as part of the crew of researchers on the Exploration Vessel (E/V) Nautilus. Nautilus is operated by the Ocean Exploration Trust.

This internship was supported by the National Oceanic and Atmospheric Administration Educational Partnership Program with Minority Serving Institutions, (NOAA-EPP-MSI), which provides funding to the NOAA-Cooperative Science Center for Earth System Sciences and Remote Sensing Technologies (NOAA- CREST), at City College, City University of New York (CUNY).

Escarzaga came away with ‘solid technical skills that will help advance’ is dissertation’, and he also gained “valuable experience in working in an operational science setting...and [in] developing long-term professional networking relationships.”

UTEP is one of six consortium members of the NOAA CREST Center led by the City College.

NOAA-CREST PH.D. SCHOLAR VISITS PUERTO RICO WATERSHEDS

Puerto Rico, November 2018—With the goal to fulfill the National Oceanic and Atmospheric Administration’s (NOAA’s) mission to promote oceanic and atmospheric conservation throughout all strata of society, Dr. William J. Hernandez, NOAA-CREST, City College Postdoctoral Fellow), participated in a learning exchange.

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SPECIAL INTEREST

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NOAA-CREST PH.D. SCHOLAR VISITS PUERTO RICO WATERSHEDS

in Puerto Rico, this past November, that empowered watershed coordinators from various localities, with tools that will help intercept the degradation of coastal waters.

A DAY WITH A VIEW

On the last day of this learning exchange the participants took not to the waters but to the mountains—specifically, to coffee farms, (which are found in mountains): from there, they took in a mountain-to-shore perspective of the Guánica Watershed, and contributed to closing remarks.

Says Dr. Hernandez: “To me these workshops promote the conversations and exchange of ideas that are fundamental in our quest to better understand the land-sea connections and their effects on corals, but also how we can provide better tools to support these watershed restoration projects”.

ISLAND-HOPPING FOR SCIENCE

One of the days, outfitted with snorkeling gear, sunscreen, and towels, the team set off from Isla Mayagüez, La Parguera, for a field trip to Guánica Bay, and Cayo Enriqu. At Guánica the team experienced a demonstration of water quality instrumentation and the use of drones, ocean color equipment, and water quality samples. The following day, the team departed by reefscape boat from the hotel dock, to a fascinating, 3.5 hour visit to a coral farm.

NOAA-CREST SCHOLARS VISIT A WEATHER STATION INSTALLATION

Blog by NOAA EPP-CREST UG Scholar Jessica Chiu

New York, November 19, 2018 – In order to prepare accordingly for flash floods and other hazards, the New York Urban Hydrometeorological Testbed (NY-uHMT) has set up a dense hydrometeorological network consisting 19 autonomous weather stations monitoring both meteorological and hydrological data, (air temperature, relative humidity, precipitation, and soil moisture), every 15 minutes, throughout the city. This data is used for high-resolution urban flash flood guidance and hazard warning (uFFG) system, for the public.
A group of NOAA-Center for Earth System Sciences and Remote Sensing Technologies (CREST), scholars from City College, City University of New York (CUNY), visited NY-uHMT installations at two NYC public schools. The NOAA-CREST team comprised of undergraduates Jessica Chiu and Fausto Taveras, graduate student Adrian Peña, and NOAA-CREST mentor Dr. Tarendra Lakhankar.

At PS 151 Mary D. Carter School in Woodside, the team was hosted by grades K-5. At Junior High School 223, Montauk Intermediate School, in Brooklyn, the school teachers promote hands-on activities using near real-time data from these weather stations.

For Jessica, an Environmental Engineering major at the City College of CUNY, the installation site visits were a rare opportunity to see in person, those that a project affects directly, and the visits reminded the researchers that it is just as important to connect with the people who are beneficiaries of the valuable information, as it is to study the information itself.

REMOTE SENSING OF SNOW & ICE WORKSHOP AND DRONE EXPERIMENT

By NOAA EPP-CREST UG Scholar Joshua Fabian

Caribou, Maine Nov 13-14, 2018 - The first day of my adventure started with the Remote Sensing of Snow and Ice workshop, to investigate areas where data from snow projects would be helpful to the NOAA Weather Offices and the local communities; This workshop was organized by the National Weather Service at their Weather Forecast Office’s (NWS-WFO), office. The scientists from the National Oceanic & Atmospheric Administration Center for Earth System Sciences & Remote Sensing Technologies (NOAA-CREST), and the University of Puerto Rico, Mayagüez, (UPRM), presented to individuals from various NWS-Forecast Offices (Caribou, Albany, Gray, and Portland), from the Northeast River Forecast Center (RFC), Maine Emergency Management Agency, and from the Local United States Geological Survey (USGS) agency. Participants included: Todd Foisy, NWS; Dr. Jonathan Muñoz, UPRM/NOAACREST; Dr. Peter Romanov, CUNY/NOAA CREST; Dena Winslow, Micmac Tribal planner; Nicholas Stasulis, USGS.

Frozen Flood

The assembled scientists were also enthused about using drones to gauge river ice conditions and predict the potential of flooding, while they were in Caribou: When the river freezes it often overflows its banks, and the community alongside the riverbanks is greatly affected.

Too Dangerous

With drone technology it would be possible to reduce human deployment into dangerous areas. Concerns that were raised were the difficulty of measuring the ice depth or ice quality with a drone.

Unfortunately, with wind speeds reached as high as 21 mph, and snowfall, we were unable to operate the drone. (Weather conditions need to include at least 3 statute miles of visibility, winds speeds not to exceed 15 mph, and absence of precipitation.)

Planning to Return

We plan to revisit Caribou in February of next year to attempt another drone mission. In the meantime, we will be collaborating with the NWS and USGS to formulate a plan to assess river ice using a drone.
NOAA-CREST GRADUATES ARE HIRED

Adedoj Adedoyya, Masters Student, City College; NOAA EPP Scholar; Graduated Summer 2018; Hired October 2018 as Environmental Engineer, at the Bureau of Water and Sewer Operations (BWSO), New York City Department of Environmental Protection (NYCDEP)

Yoribaldis Olivo, Masters Student, City College of New York, NY; NOAA EPP Scholar; Graduated Summer 2018; Hired Fall 2018 as a Structures Engineer at Pratt & Whitney, Hartford, Connecticut

Stephany Paredes Mesa, Masters Student, City College; NOAA EPP Scholar; Graduate Summer 2018; Hired September 2018 as an Environmental Engineer, Bureau of Engineering Design and Construction, NYC Dept. of Environmental Protection (BEDC, NYCDEP)

Christopher Lunger, Masters Student, City College; NOAA EPP Scholar; Graduate Summer 2018; Hired October 2018 as a Systems Engineer, Boeing, VA

Tyler Tucker, Masters Student, San Diego State University, NOAA EPP Scholar; Graduated Summer 2018; Hired July 2018 as a Software Developer, Scripps Institution of Oceanography, San Diego, CA

UPCOMING EVENTS

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>2/8, TX</td>
<td>El Paso, TX</td>
<td>UTEP Engineering &amp; Science Center EXPO</td>
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<td>2/7-9, DC</td>
<td>Washington, DC</td>
<td>The 33rd BEYA STEM Global Competitiveness Conference</td>
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<td>2/15, MD</td>
<td>Baltimore, MD</td>
<td>UMBC Spring Career &amp; Internship Fair</td>
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<tr>
<td>3/9, CA</td>
<td>San Diego, CA</td>
<td>SDSU Diversity Career Conference</td>
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Students and faculty please update your iSDP profiles before the start of the Spring 2019 semester

CESAR’S COQUITO
This Puerto Rican ‘eggnog’ was very popular at the CREST party

1 can of each: Coconut milk; Condensed milk; Evaporated milk
1 Tbsp. Cinnamon powder; 1 cinnamon stick; 1/2 tsp. nutmeg; 2 raw eggs

Mix & enjoy
CREST’S NEWEST ADMINISTRATORS

Dr. Laurie Cook, the Education Expert
For the last 2.5 years, Dr. Cook served as a Project Manager on a competitive national NASA STEM Education and Accountability Project grant called NASA’s BEST (Beginning Engineering, Science and Technology), a $1.7 million-dollar project. Dr. Cook was responsible for leading a team across all NASA centers in the U.S. to ensure alignment with NASA’s Educational Professional Development (EPD) priorities and outcomes.

Ms. Sarah García, the Communications Manager
Ms García has an M.S.Ed., and a bachelor’s in English, with a minor in Journalism. Ms García’s journalistic pieces have appeared in Hispanic Association of Colleges and Universities (HACU), National Internship Program (HNIP) communications. Ms García also has 10-years experience in professional development, and has been a college instructor.

CREST PARTY: BURMESE DANCE, KARAOKE, KRIS KRINGLE
WHAT IS NOAA-CREST

NOAA CREST is a national consortium of six universities throughout the country that are designated as minority-serving institutions (MSI), Hispanic-serving institutions (HSI) or Historically Black Colleges and Universities (HBCU). These institutions provide fellowship support, research, and core competency and experiential training opportunities for students particularly from underrepresented minority communities in NOAA mission sciences for future workforce and careers in NOAA mission-related STEM fields.

To Inquire or Apply
https://www.noaacrest.org

Lead Institution:
The City College of the City University of New York, NY

Consortium Partner Institutions:
Hampton University, VA
San Diego State University, CA
University of Maryland, Baltimore, MD
University of Puerto Rico, Mayaguez
University of Texas, El Paso

BECOME A NOAA-CREST SCHOLAR!

Who Can Apply: (UG) 2nd semester sophomore Graduates in Masters programs, or doctoral candidates

Eligibility: U.S. citizen; F/T student; 3.0 GPA minimum; Student at a consortium institution, as well as City College; Under-represented minority

Benefits: Conduct NOAA-related research under the guidance of a faculty mentor; Professional networks; A yearly fellowship stipend

Fellowship Amounts:
UG: $12,000/year for up to two years; Masters: $25,000/year for two years, and up to $5,000 for NERTO internship; Ph.D: $36,000/year for 5 years, and up to $10k for NERTO

NERTO is the internship for G, and Ph.D. NOAA-CREST scholars)

NOAA-CREST
https://www.noaacrest.org/

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