

## EPP/MSI Introduces Three New Graduate Research and Training Scholarship Recipients

The Educational Partnership Program (EPP) with Minority Serving Institutions (MSI) Graduate Research and Training Scholarship Program (GRTSP) proudly introduces its most recent scholarship recipients, Carlos Carrizo, Chante Davis and Keren Rosado.

GRTSP leverages the initial investment made by NOAA in the EPP/MSI Cooperative Science Centers (CSC) and is intended to create a pipeline of well trained and educated students from the EPP/MSI CSCs who earn degrees in science, technology, engineering and mathematics (STEM) disciplines as well as in applied science, environmental policy and management areas that support NOAA's mission.

### CREST GRTSP Scholarship Recipient – Carlos Carrizo



Carlos Carrizo's passion for marine life and ecosystems started when he was 10 years old. He has always had a strong interest in biology and oceanography; especially the study of marine organisms and wildlife. This year, Carlos is one of three graduate students in the most recent NOAA EPP/MSI Graduate Research and Training Scholarship Program class.

Carlos received his Bachelor's degree in Electrical Engineering in 2012 from The City College of New York (CUNY). He has been part of numerous ocean and coastal campaigns sponsored by NOAA CREST. In spring 2013, he began working toward his Ph.D. at CCNY, under the supervision of Dr. Alex Gilerson in the Optical Remote Sensing Lab. His dissertation entitled "Polarization effects at the top of atmosphere over ocean and coastal waters and their impact on

satellite remote sensing considerations" is geared towards improving satellite imagery by assessing and correcting for undesired polarization sensitivity on TOA (Top of Atmosphere) satellite sensors. This research and training opportunity will be performed under the mentorship of Dr. Menghua Wang and Mr. Michael Ondrusek of the NOAA Center for Satellite Applications and Research.

## LMRCSC GRTSP Scholarship Recipient - Chante Davis



Chante Davis is a PhD candidate at Oregon State University, a partner of the NOAA Living Marine Resources Cooperative Science Center. As a recipient of a GRTSP scholarship, Chante reported that the funds will enable her to complete her dissertation using graph theory in riverscape genetics to understand the population differentiation of Chinook salmon in the Siletz River, Oregon.

Chante gained technical and theoretical experience understanding the life histories of organisms through coursework and research during her Master's thesis, completed in 2006 at the Moss Landing Marine Laboratories (MLML) at California State University Monterey Bay, in collaboration with Pacific Shark Research Center (PSRC).

As a Graduate Research Assistant, Chante worked on a contract for the Confederated Tribe of Siletz Indians (CTSI). This project involved two Salmonids and two life history phases: adult Chinook, juvenile Chinook and adult steelhead. She worked with state and tribal agencies and brought organizations together to share resources and results, using genetic tools (microsatellites) to determine the population structure of adult Chinook within Siletz River. The results characterized genetically distinct Chinook subpopulations within the system and Chante has used this simple population characterization as part of her Ph.D. dissertation research to further investigate the unique populations within a watershed.

Chante's research will bring together theory and analysis from landscape ecology, population genetics and spatial analysis to determine which environmental variables within the riverscape have contributed to the genetic isolation of each subpopulation. The results of her research will enable managers to better understand the habitat components currently impacting genetic diversity and the ability of a salmon stock to respond to changing environmental conditions.

## NCAS GRTSP Scholarship Recipient – Keren Rosado



Keren Rosado is the first EPP/MSI GRTSP recipient from the NOAA Center for Atmospheric Science (NCAS) located at Howard University. Ms. Rosado completed an undergraduate degree in Mathematics from Sacred Heart University, Puerto Rico; a master's degree from Florida Institute of Technology; and is currently pursuing a Ph.D. in Atmospheric Science at Howard University.

Keren's Ph.D. research is focused on investigating the role of lightning during the life cycle of a tropical cyclone using the Hurricane Weather Research and Forecast hurricane model. Her hypothesis is that by forecasting lightning potential, scientists can gain insight on the mechanisms associated with rapid intensification in tropical cyclones. Rapid

intensification includes changes in wind speed and minimum sea level pressure. The prediction of lightning involves forecasting of vertical velocities and mixing ratios of hydrometers whose vertical distributions can help to explain charge separation and convective intensity.

Keren is conducting her research and interning at the National Weather Service, Environmental Modeling Center under the mentorship of Dr. Vijay Tallapragada.

During her spare time, Keren trains for, and participates in, triathlons. She says that participating in physically and mental challenging activities keeps her organized and focused, qualities that also help her to be successful in her scientific research.