

# OFFICE OF EDUCATION

## Educational Partnership Program

### & Student Scholarship News

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### A Scholar's Point of View

#### The Path I Have Taken

by Zakiya Hoyett

If someone had told me years ago that today I would be working on my doctoral degree in Environmental Science, I probably would have laughed uncontrollably. In kindergarten, I already knew I wanted to grow up and become a "baby doctor." As I got older, and learned what was required to become an obstetrician/gynecologist, I decided that was not what I wanted to be after all. It was some time after taking high school biology that I became fascinated with forensic science and thought that would be my career choice.



Zakiya Hoyett

In the fall of 2004, I was accepted into the Dorzoretz National Institute of Mathematics and Applied Sciences (DNIMAS) at Norfolk State

University. The DNIMAS program focuses on graduating students who are capable of successfully completing graduate studies in the basic and applied sciences, of entering medical or other professional schools, and/or of

finding occupations in industry, government, and education. I entered the program as a chemistry major with plans for becoming a forensic scientist. These plans changed once again when I realized that even though I find forensics fascinating, I don't have the stomach for the gory aspects of the job!

I was introduced to the NOAA Educational Partnership Program (EPP) in 2007 through the Undergraduate Scholarship Program; it was the second internship of my undergraduate career. I worked under Mr. Tom Bigford of the National Marine Fisheries Service in Silver Spring, Maryland. My previous internship in the National Science Foundation's Research Experience for Undergraduates had a limited perspective, focusing on opportunities in academia. My first NOAA internship offered me a broader exposure; while I gained a thorough understanding of the ins and outs of working in the government sector, I learned about opportunities in the private sector as well as academia. I was surprised by how much time scientists spent in meetings; totally NOT what I had expected!

It was during the second year of my EPP experience that I fell in love with NOAA and environmental science. I worked under the supervision of Dr. LaToya Myles, in the Atmospheric Turbulence and Diffusion Division, a part of the NOAA's Air Resources Laboratory, in Oak Ridge, Tennessee. This internship was much more what I had expected to undertake while working with NOAA. For this appointment, I performed routine atmospheric trace gas analysis in east Tennessee and collected atmospheric data in the Duke Forest in North Carolina as part of an on-going project between NOAA, the Environmental Protection Agency (EPA), US Department of Agriculture and the University of North Carolina. I enjoyed the science, but I was most impressed with the scientists I worked with during that experience. They were

eager to share not only their knowledge of the science, but their experience in the environmental field, the pros and cons of working for NOAA, and suggestions for my career path. It was actually Dr. Myles, a graduate of the Environmental Sciences Institute (ESI), NOAA Environmental Cooperative Science Center (ECSC) and an EPP Graduate Sciences Program (GSP) scholar at Florida A&M University, who encouraged me to pursue a degree in environmental science, convinced me to apply for the graduate program at ESI and introduced me to Dr. Larry Robinson, who was then Director of ESI as well as Director of NOAA's ECSC.

In the fall semester of 2008, I began navigating the somewhat tricky path from general chemist to environmental scientist with a concentration in environmental chemistry. I had to learn the "gray" areas that accompany environ-

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mental science. I had to understand that everything influences everything else and that all things must be considered when making conclusions; talk about one confused student! I spent countless hours sitting in the lab trying to understand the basics of ecology and the fundamentals of environmental chemistry and practicing the lingo of this new science and how to convey my thoughts to others in a way that made some kind of sense. Thanks to the patience and devotion of the professors at ESI, concepts started sinking in and I began to feel comfortable in my "new skin." As a graduate research assistant for the NOAA ECSC, I have been provided many opportunities for professional growth. I have had opportunities to network with esteemed scientist--guests at FAMU as part of ESI's Seminar Series or fellow

to examine the concentrations of selected PPCPs in sediments in Tampa Bay, compare these concentrations with those observed in Apalachicola Bay sediments, and conduct a sediment quality triad study at multiple stations in the Tampa Bay area using amphipods in 10-day sediment toxicity tests. The results of my project will help illustrate what impact these products might have on the ecosystem. Thus far, I have been fortunate to collaborate with scientists from NOAA, the National Institute for Standards and Technology, the US Geological Survey, and EPA. Because of my involvement with NOAA EPP and NOAA ECSC, I aspire to work alongside the same wonderful scientists that helped shape me into the scientist I have become--and I look forward to the opportunity to do the same for another rising young scientist one day.

Other federal agencies as well as private industry partnerships can be found here; the facility houses supercomputers for NOAA, DOE and the National Science Foundation. Participants explored potential opportunities for the future, including research collaboration, post-doc opportunities, faculty/staff exchanges, student internships and K-12 STEM collaboration.



*Representatives from NOAA and the NOAA CSCs, Standing in Front of NOAA Supercomputer GAEA at ONRL*



*Hoyett Presenting her Research at the Poster Session at NOBCChE\* Regional Meeting*



*Hoyett & Ariana Marshall, Team Coaches with FAMU 2011 Ocean Science Bowl High School Team (Representing Several High Schools from Leon County, FL)*

### 2011 NOAA Environmental Cooperative Science Center (ECSC) Annual Meeting

NOAA ECSC's Annual Meeting was held April 17 - 19, 2011 in Tampa, Florida. Participants included ECSC principal investigators and co-investigators, staff, students and representatives from NOAA. The purpose of the meeting was to review and assess ECSC's performance during the prior year and to ensure that goals and objectives are met successfully for the final year of the award. Several NOAA representatives gave an overview of the agency's priorities and offered suggestions to ECSC about broadening collaboration with NOAA for student training and placement. Four ECSC students presented an overview of their research



*Jovan Morris, Florida A&M U Student Presenting her Research at ECSC Meeting*

and answered questions from the audience.

attendees at one of the conferences ECSC has enabled me to attend and present my research. I have also been able to give back to my community by engaging with K-12 students from underrepresented groups in science, technology, engineering and mathematics (STEM) fields. I've volunteered as an advisor to the NOAA ECSC Ocean Science Bowl team and helped with the ESI Summer Camp.

My current research focuses on the effect of select pharmaceuticals and personal care products (PPCPs) on sediment quality in Tampa Bay, Florida. The status of these contaminants will be observed in both Tampa Bay and Apalachicola Bay sediment. The objective of my dissertation project is

### A Visit to Oak Ridge National Laboratory

On Monday, June 13, 2011 Louisa Koch, Director of NOAA's Office of Education and representatives of the NOAA Cooperative Science Centers (CSCs) visited Oak Ridge National Laboratory (ORNL) in Oak Ridge, TN. The gathering was organized as an opportunity for the CSCs and ORNL to gain a better understanding of each organization's research and education capacities. Like the CSCs, ORNL is comprised of partnerships; it is managed by a University of Tennessee—Batelle Memorial Institute partnership, in support of the US Department of Energy (DOE).

## **CREST Symposium at Hampton University**

The annual CREST Symposium kicked off at Hampton University at 9 am on April 27, 2011. The goal of the gathering was to bring together the “remote-sensing-and-related-applications student and scientific community” from across the nation for two days of discussion and networking. More than 80 participants—many of whom were students and post-doctoral scientists from CREST partner schools--shared research results and interacted with scientists and educators from academia, industry, NOAA and other federal agencies. This opportunity to communicate their work is an important tool for encouraging students’ contribution to essential science. Indeed, as Sir Isaac Newton said, “If I have seen further, it is by standing on the shoulders of giants.” Forty five oral and twenty three poster presentations were made during the symposium, on research themes that included air, climate, coastal waters, hydro-climate, and hydrology. The latter part of day one included a students’ poster session, and concluded with a banquet at the Virginia Air and Space Museum. After a second day of oral presentations, awards were made for best student research, and the Symposium concluded with remarks by CREST Director Reza Khanbilvardi, sending everyone home with renewed enthusiasm for pursuing their research!



*Students, Scientists and Educators Gather at a CREST-Sponsored Symposium at Hampton University*

## **Hands-on Learning for Teachers at Texas A&M University-Corpus Christi (TAMUCC)**

“Teaching Environmental Science” is a graduate-level course designed for those teaching in the K-12 setting. Offered at TAMUCC, one of nine partner institutions that comprise the NOAA Environmental Cooperative Science Center (ECSC), the course focuses on experiential learning. The goal is to provide balanced information and to promote partnerships among teachers, government agencies, businesses, and community organizations, so that their K-12 students may become knowledgeable environmental citizens of the future. Since ECSC’s goal is to educate a new generation of environmental scientists in NOAA-related sciences, particularly from under-represented minority groups, and to develop the natural and social science tools for integrated assessments of ecosystem health in support of coastal environmental decision making, this class is well-aligned to help.



*Teachers Learn “Track Casting,” an Activity They Can Use on Field Trips with Their Own Students, to ID Wildlife that Use Beach Habitat*

This year, 12 teachers were enrolled in the course: 5 high school science teachers, and 7 middle school math and science teachers. Funding for the course came from the NOAA Environmental Cooperative Science Center and the Texas Higher Education Coordinating Board. All tuition and fees for the teachers were provided, as well as many resources for their classrooms.

Materials supplied to the teachers included seine nets, aerators, hydrometers, and saltwater aquaria; and the class was provided sets of



*Teachers Try their Hands at Sampling, on Board a small TAMUCC Research Vessel*

binoculars, compasses, and GPS units. Teachers not only received graduate credit towards a Masters degree, they also earned 45 hours of Continuing Professional Education credit.

## Cooperative Science Centers Spring 2011 Meeting in Silver Spring

Since the inception of the Educational Partnership Program (EPP) Cooperative Science Centers (CSCs), the Center Directors have met regularly at NOAA in Silver Spring to examine strategies, success stories, challenges and solutions. This year, the meeting focused on:

- \* ensuring greater “in-reach” to NOAA, to further acquaint NOAA line and staff offices with the Centers
- \* NOAA mission-capabilities and the potential Centers offer the agency
- \* ensuring that the Center Directors gained a greater understanding of NOAA’s needs.

Over the course of three days, March 23-25, 2011, Center leadership, scientists, technical monitors, students, Office of Education Silver Spring (OEDSS) staff and invited guests met in a variety of stimulating sessions. In her opening comments to the Center leadership and scientists, OEDSS Acting Director Audrey Trotman emphasized to the Center Directors the value of their work in developing resources that can help NOAA’s mission. The sessions that followed included presentations and discussions with NOAA line offices, including:

National Environmental Data and Information Systems  
Office of Marine and Aviation Operations  
Oceans and Human Health Initiative  
National Sea Grant  
National Marine Fisheries Service  
National Weather Service

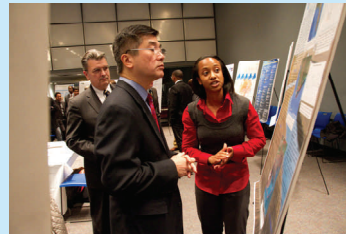


Representatives of the NOAA Cooperative Science Centers & NOAA line offices listen intently to presentations during their March meeting in Silver Spring

A new highlight for the meeting was the poster session, which brought students from each of the CSCs to NOAA’s Science Center, for direct interaction with NOAA personnel. The session allowed NOAA scientists and managers to give critical feedback to students, plus exposed NOAA staff to the kinds of research occurring at the Centers, and the quality of their students. This poster session was so intriguing, it captured the attention of then-Commerce Secretary Gary Locke, who chose to devote more than an hour of his time to attending the gathering.



Lonnie Gonsalves, a graduate student at LMRCSC explains his doctoral research on essential fatty acid composition and immune competence of Chesapeake Bay striped bass to Secretary Locke.



Judith Sarkodee-Adoo, a graduate student at ECSC explains her research monitoring shifts in drivers of primary production in two Gulf of Mexico estuaries, following the Deepwater Horizon oil spill to Secretary Locke



NCAS Graduate student Micheal Hicks explains his research into the development of technologies to yield highly resolved observations & analyses of temperatures and moisture in the lower troposphere over land to Secretary Locke.



Secretary Locke asks Anthony Cochran, a graduate student at NOAA ISETCSC about his research on detection of trace gas in the troposphere from biomass burning.



CREST graduate engineering student Ana Picon discusses her atmospheric research to improve aerosol retrieval over urban areas with Secretary Locke.

The NOAA Cooperative Science Centers

**CREST:** Cooperative Remote Sensing Science and Technology Center  
**ECSC:** Environmental Cooperative Science Center  
**LMRCSC:** Living Marine Resources Cooperative Science Center  
**NCAS:** NOAA Center for Atmospheric Sciences  
**ISETCSC:** Interdisciplinary Scientific Environmental Technology Cooperative Science Center

The Center Directors ended their gathering with a discussion of lessons learned since the inception of the CSCs, including best practices, challenges and suggested potential solutions and next steps. As a result of this spring’s gathering, Centers have identified areas for collaboration, leveraging and coordination to expand contributions and support NOAA’s mission.

## Upcoming Events or Opportunities of Interest

### OCTOBER 2011

10/14-15/2011

Marine and Estuarine Environmental Sciences Colloquium (LMRCSC)

10/25/2011

UMES NSF CREST External Advisory Committee Meeting

10/29-30/2011

Society of Hispanic Professional Engineers (SHPE) Conference, Anaheim, CA

### NOVEMBER 2011

### DECEMBER 2011

12/5-9/2011

American Geophysical Union (AGU) Fall Meeting, San Francisco, CA

### JANUARY 2012

1/22-26/2012

American Meteorological Society (AMS) Annual Conference, New Orleans, LA

1/31/2011

StudentTracker Data Reports Due (1st Triennial)

### FEBRUARY 2012

DATE TBA

National Ocean Science Bowl Regional Competition, Stony Brook, NY

2/20-2/24/2012

Advancing the Sciences of Limnology and Oceanography (ASLO) 2012 Ocean Sciences Meeting, Salt Lake City, UT

### MARCH 2012

3/12

EES/ISETCSC Day (tentative)

Date TBA

CREST Annual technical Meeting –NOAA CREST Center, New York, NY

3/26-28/2012

NOAA Sixth Biennial Educational Partnership Program Science and Education Forum at Florida A&M University  
– NOAA Environmental Cooperative Science Center, Tallahassee, FL

### APRIL 2012

Date TBA

NOAA CREST Annual Day- CREST, CCNY & all other campuses (simulcast)

Date TBA

NASA Day (NASA funded climate education grant involving local schools)

04/30/2011

First-Six Month Performance Progress Reports due

### MAY 2012

5/15-16/2012 OR 5/17-18/2012

CREST Annual External Advisory Board Meeting

5/25-29/2012

ISETCSC Teachers Workshop

5/25-29/2012

High School Summer Camp

5/31/2012

StudentTracker Data Reports Due (2nd triennial)

### JUNE 2012

6/2012

ESES, REU Summer; CREST-SHIP; STEM and Weather Camp (OUTREACH EVENTS)- CREST,CCNY

Date TBA

NESDIS-CI-CREST Directors' Meeting—CIMSS, University of Wisconsin, MI

### JULY 2012

7/2012

ESES, REU Summer; CREST-SHIP; STEM and Weather Camp (OUTREACH EVENTS)- CREST,CCNY

### AUGUST 2012

8/19-23/2012

America Fisheries Society (AFS) Annual Meeting, Minneapolis-Saint Paul, Minnesota

8/2012

ESES, REU Summer; CREST-SHIP; STEM and Weather Camp (OUTREACH EVENTS)- CREST,CCNY

Date TBA

NESDIS-CI-CREST Administrators' Meeting- CIMSS, University of Wisconsin, MI

Date TBA

NOAA/NESDIS/STAR/CoRP Annual Science Symposium

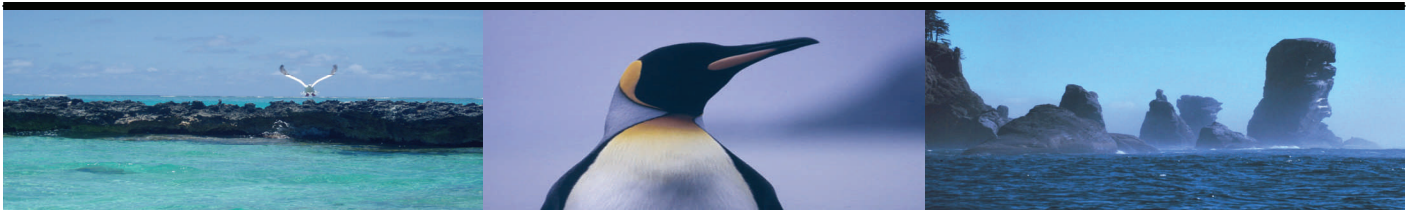
### SEPTEMBER 2012

09/30/2012

Second-Six Month Performance Progress Reports Due

09/30/2012

Student Tracker Database Reports Due (3rd Triennial)



### The EPP Story

Established in 2001, the Educational Partnership Program (EPP) involves a strong network of education and training programs created to sustain the National Oceanic and Atmospheric Administration's (NOAA) mission and enhance its capabilities in the 21<sup>st</sup> century. The EPP is part of NOAA's effort to promote environmental literacy and to develop a future science, technology, and engineering workforce, with an emphasis on increasing participation from underrepresented communities, in disciplines critical to NOAA's mission. Since its inception, the program has supported 1490 undergraduate, graduate and PhD students in NOAA- relevant areas of study. As a result of EPP funding, mentoring and training activities, we impact national graduation rates of students in science and engineering fields. In addition to student achievement, academic institutions participating in these NOAA sponsored programs are also witnessing capacity-building transformations evidenced by new academic programs, revised curricula, enhanced research capacity and more meaningful partnerships with NOAA scientists, centers and institutes. These outcomes clearly demonstrate the breadth and significance of the contributions that EPP participants are making in support of NOAA's mission, and to their institutional objectives.

In our continuing effort to familiarize you with our staff, we've got two new biographies in this issue.

**Elvis E. Efamba** is the Information Technology (IT) Specialist for the Office of Education/Educational Partnership Program. His responsibilities range from providing OEd staff and associates with general IT support (email, website, desktop, laptop, printer, intranet and projector setup, etc) to analyzing, designing, developing, and

managing OEd Student Scholarship Programs secure database online systems.



Prior to EPP, Elvis worked for Lockheed Martin as a Web programmer on a contract with the Social Security Administration (SSA) in Windsor Mill, Maryland. During his time with Lockheed, he programmed, tested, and debugged web pages in SSA Disability Benefits Review Web System (eWork). While attending Prairie View A&M University in Prairie View, Texas, Elvis interned with Shell Global Solutions, where he designed, coded, implemented, and supported the department's intranet based-website. Elvis holds a Bachelor's Degree in Computer Engineering and Technology from Prairie View A&M University and will soon be pursuing a Master's Degree in IT.

**Janet Brown** joined the Office of Education in May this year. She is responsible for entering scholarship data, and maintaining scholarship program information using Microsoft Access, Excel and Word. She assists the scholarship program managers in assuring that the program runs smoothly, including supporting student training, orientation and presentation weeks as well as assuring prompt response to informational requests about the program.

Before joining OED's scholarship team, Janet worked for Citigroup, in New Jersey for 5 years, as a Senior Adminis-

trative Assistant. She supported the Managing Director and a team of 250-plus associates for the Global Markets Division. She was the gatekeeper for all of the day-to-day administrative support functions for the team.

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