Greetings from the Director:
Dr. Khanbilvardi, CREST Center Director, City College, CUNY

We ended 2018 with many accomplishments both in advancing our sciences in the area of Earth system sciences and satellite remote sensing technologies, and training and graduating many STEM, (Science, Technology, Engineering, and Math), professionals in NOAA STEM fields. Many of our graduates have already started their professional careers in local and state agencies, the federal government, and private contractors. We certainly take pride in all our work.

As we start the new year and the new semester, I hope also that you will take some moments to reflect on the work that we do together at CREST.

CREST is one of the four NOAA-EPP Cooperative Science Centers in the country, which successfully recruits, educates, and trains a diverse group of students, early career scientists, and engineers, to become competent professionals in NOAA-related STEM sciences. Our success to execute our mission is a tribute to the work that each of you do. The start of Spring semester also coincides with Black History Month which we observe. In celebration of this important month, I would like to honor and thank many of our African-American students, faculty, and staff for their achievements and hard work in service to our goal and mission.

MEET DR. NEAL PHILLIP - "DRIVEN"


If Dr. Phillip had a license plate slogan it might be his one-word summary of himself, “driven”:

Dr. Phillip is the impressive and very accomplished chairperson of the Department of Chemistry and Chemical Technology at Bronx Community College (BCC), of the City University of New York, (CUNY); He oversees an annual operating budget of approximately $3.2 million, and 64 professionals, (20 full-time faculty, 38 adjunct faculty, four full-time College Laboratory Technicians, and two office staff). He oversees the department’s five degree programs, (Chemistry, Science for Forensics, Earth Systems and Environmental Science, Environmental Technology and Pharmaceutical Manufacturing Technology).

In This Issue:
Dr. Neal Phillip....................p1
Dr. Reginald Blake...............p4
Jahnelle Howe....................p5
African-American Scholars and Recent Alumni...............p6
Moreover, Dr. Phillip participates in a slew of annual and special projects – see the impressive list at the end of this conversation – and he is uncommonly passionate about encouraging students to new heights.

What is your motivation?
I try to be the best role model for my family, my students and my colleagues. I never allow myself to get comfortable and I am always looking for new challenges - no matter how daunting they may appear, to make a positive impact.

What is one way that you nurture up & coming Black scientists?
Along with administering our very active department I find time to coordinate the participation of 50 BCC students every February at the Annual Black Engineer of the Year Award (BEYA) Conference in Washington, DC. Students win internships and academic awards and generally walk away with a greater appreciation for STEM and a stronger desire to succeed in their STEM careers. Our students graduate and move on to become successful Medical Doctors, Physician Assistants, Pharmacists, Chemists, Earth Scientists, Engineers and more.

What else do you create an environment of success for your students?
I…show my students a lot of respect and give them a lot of responsibility which allows them to show a tremendous amount of initiative. When I received a $50,000 grant to purchase a Picarro Greenhouse gas monitor, one of my students who had completed two internships (in Colorado, and Washington State), was able to install the complicated piece of equipment on his own. That same student, and another Earth Science major, were able to install a new weather station on their own…when our Texas Weather Instrument weather station was destroyed during Hurricane Sandy in 2012.

What legacy do you want to leave for fellow Black Americans in general, (young scientists, colleagues, society)?
I would like African Americans to remove the word “can’t” from their vocabulary and always push and strive to accomplish any task(s) that they set out to accomplish in life. I would like to leave a legacy that will make my family and ancestors proud of all my accomplishments - despite the many obstacles that I have encountered, to help others and make this world a much better place for all.

What is your marker of success?
My marker…is creating social impact through my research and teaching activities.

You have an anecdote about a frying egg on a sidewalk – tell us about that
While [a delegation from BCC] were in Townsville, Australia, to present at the 26th Annual Global Eco Asia-Pacific Tourism Conference, we conducted monitoring activities of local temperature, humidity, carbon dioxide, and UV Radiation over a three-day period. Coincidentally, during those same three days, Townsville experienced the highest temperatures in its history and much of the local flying fox bat population died in the sweltering heat. Since we had collected minute by minute and block by block weather data…we were able to show the Townsville Sustainability Services Office…that the heat index was beyond the tolerance of the bats. It was so hot that one local resident even fried an egg in a frying pan placed on his driveway.

Share about the NOAA-related activity in Spain:
I recently took students to Spain and Australia to do sustainability-focused research activities. Many of the students had never traveled abroad before and I was especially proud of all that we... accomplished in those countries, including installing solar powered wireless weather stations that could help monitor climate change, training students and staff members on sustainability, and the use of NOAA-CREST designed backpack weather stations.

Your favorite quote sums up your mindset, and your work, and can close out this conversation:
"We must, indeed, all hang together, or most assuredly we shall all hang separately." – Benjamin Franklin in a call for unity in 1776.
Dr. Phillip’s Impact Projects

- Feb. 2, 2019, co-authored an article about experiential educational models in the Trinidad & Tobago Express newspaper: https://www.trinidadexpress.com/opinion/columnists/what-constitutes-an-educated-trini/article_97706d0c-274e-11e9-b31a-2ba1addc782e.html

- Reviewer, the NSF Program for International Research and Education (PIRE) and the NSF Graduate Research Fellowship Program (GRFP)

- Palma de Mallorca, Spain Study Abroad program through a $20,000 Center for International Educational Exchange (CIEE) Study Abroad Access grant to take 10 Bronx/CUNY students to conduct sustainability activities Mallorca.

- Coordinator, Greenhouse Gas Monitoring Program, with a Picarro greenhouse gas monitor ($50,000) and the BCC weather station

- Invited speaker, the 26th Annual Global Eco Asia-Pacific Tourism Conference in Townsville, Australia

- Keynote speaker, the Growing Sustainable Communities Conference, Dubuque, Iowa, October 2016.
- Worked with NBC-TV on a leaking methane gas story in response to a building explosion that killed nine people in Harlem in 2014.

- Hosted a Smarter Cities Workshop, BCC, October 2014: brought together top leaders in the world in sustainability, including the leaders of the IBM Smarter Cities program, the Rockefeller Foundation 100 Resilient Cities program, and the City of Townsville, Australia (one of the winners of the 2012 IBM Smarter Cities Challenge Award).

Top left: Solar powered wireless weather station install with BCC students
Top right: Holding an Antarctic ice core: National Ice Core Laboratory, Lakewood, Colorado, May 2016
Above: Colegio San Cayetano High School, Palma de Mallorca, Spain: Teaching students about Fuel Cell Technology, June 2018
As a noted climate scientist Dr. Reginald Blake need not oblige an interview. His accomplishments are a megaphone: just last summer, the White House conferred on Dr. Blake the Presidential Award for Excellence in STEM and Engineering Mentoring (PAESMEM); Dr. Blake has served on the New York City Panel on Climate Change (NPCC), under two mayors (appointed by Mayor Bloomberg, and currently under Mayor de Blasio).

Giving Back
Dr. Blake’s accomplishments are also proof that what you reap is what you sow: Dr. Blake received a City University of New York (CUNY) education, (bachelor’s and master’s degrees from City College, and a PhD from the CUNY Graduate Center, (dissertation research at Columbia University’s NASA Goddard Institute for Space Studies), and for 13 years, he has been successfully nurturing future cohorts of CUNY scientists through his leadership of the STEM-designated Black Male Initiative program, at New York City College of Technology (City Tech), CUNY, resulting in City Tech being an IHEP Model Replication Institution.

And what undergirds all of these professional accruals is the most interesting read:

**Your favorite quote reveals the heart behind your success**
"If I can help somebody as I travel along this way, then my living shall not be in vain." It is not only my favorite quote, (…from old Negro Spiritual) but it is also the mantra for my life.

**Name the help you aim to give**
The legacy...of passion for scholastic excellence that is undergirded and anchored by a passion for advancing the welfare of the whole human race.

**Please explain: (Grassroots + Black Americans) x Hope = Envy**
For African Americans...we desperately need a grassroots STEM movement that is revered and celebrated by the local community, that offers our young people...participation in cutting-edge innovations, that breathes a new and different air of hope and optimism into the 'hood, and that is the envy of the world.

**Yours is a 'bottom-up' approach**
For African Americans, we need to find our place (carve out our own niche) and play our role in a...STEM knowledge revolution.

**You seem to understand that knowledge alone cannot help humanity**
The habits that I embrace... include:
> Spiritual and emotional centeredness
> Striving to be the best human being (scholar, friend, servant), that I can be
> Principles that are laced with truth, honesty, integrity, and fidelity
Jahnelle Howe is a NOAA-CSC-EPP scholar pursuing a Master’s degree in Earth and Atmospheric Sciences. Jahnelle, the youngest of two siblings, is originally from Montserrat, a Caribbean island only 10 miles in length and 7 miles wide. Her research project is titled “Identifying Coral Symbionts in P.R,” and after completing her Master’s, Jahnelle plans to pursue a PhD. (Her bachelor’s degree is in Environmental Science).

**When did you know you wanted to major in Environmental Science?**
I’ve known since the age of eight that I wanted to be an environmental scientist and I have kept on that path until today.

**Tell me about your parents**
My role model growing up was my father. My father immigrated here first, and struggled...for many years in a job where he was treated unequally because of the color of his skin; He had one jacket, and one pair of shoes with cardboard inside the bottom because the soles were worn out. The job that he had only paid him enough to cover the rent and his bus pass, so he spent his first couple of years in America surviving off of water and meals others would buy for him at work. However, he refused to quit because he knew the importance of education and the doors and opportunity it would open, so he stayed so he could put my brother and I through school.

My mother worked serval jobs when she arrived to America, where she worked a lot of dead-end, low paying jobs to gain stability. My role models are still my parents.

**Your hobbies as a child and now?**
My hobbies as a child varied from watching the National Geographic channel, to helping my mother with potting plants, to drawing and writing. As long as I was able to be in nature and be creative I was happy and that hasn’t changed.

**Greatest motivation to succeed?**
My biggest motivation is to show family, friends, or anyone in need of inspiration that it doesn’t matter who you are, or where you come from: You can become and achieve anything. It’s one thing to have a dream but you need to put in the hard work to make that dream a reality.

**What legacy do you want to add to Black History Month with your life?**
Many minority families only view certain jobs as “good” (ex: doctor, lawyer, and business owner). I want to start introducing science to [minority] children, since a major challenge for minorities in STEM is a lack of visibility for good role models. My solution is be an accessible role model and mentor, and create as many opportunities as I possibly can for those minorities that are interested in the STEM fields. I have stood on the shoulders of giants and it is my due diligence to become someone else’s giant.
### NOAA-CREST African-American Fellows & Recent Graduates

<table>
<thead>
<tr>
<th>Hampton University</th>
<th>University of Maryland Baltimore Campus</th>
<th>City University of New York</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>David Barnes</strong></td>
<td><strong>Ephraim Alfa</strong></td>
<td><strong>Nia Rene</strong></td>
</tr>
<tr>
<td>B.S., Mathematics</td>
<td>B.A., Economics</td>
<td>M.S., Earth &amp; Environmental Science, Brooklyn College</td>
</tr>
<tr>
<td><strong>Maurice Roots</strong></td>
<td><strong>Matthew Glover</strong></td>
<td><strong>Adedoa Adeyeye</strong></td>
</tr>
<tr>
<td>B.S., Physics</td>
<td>B.S., Physics</td>
<td>M.E., Civil Engineering</td>
</tr>
<tr>
<td><strong>Nana Ephraim</strong></td>
<td><strong>Gabrielle Davis</strong></td>
<td><strong>Jahnelie Howe</strong></td>
</tr>
<tr>
<td>B.S., Aviation Management</td>
<td>B.S., Physics</td>
<td>M.S. Earth &amp; Atmospheric Science, City College</td>
</tr>
<tr>
<td><strong>Julian Payne-Dillard</strong></td>
<td><strong>PhD Scholars</strong></td>
<td><strong>Koffi Apegnadjro</strong></td>
</tr>
<tr>
<td>B.S., Aviation Management</td>
<td></td>
<td>B.E.</td>
</tr>
<tr>
<td><strong>Daniel Austin</strong></td>
<td><strong>Andrea Fenner</strong></td>
<td>Earth System Sciences &amp; Environmental Engineering City College</td>
</tr>
<tr>
<td>B.S., Aviation Management</td>
<td>San Diego State University</td>
<td><strong>Damien Hudson</strong></td>
</tr>
<tr>
<td><strong>Sterling Jones</strong></td>
<td><strong>Equisha Glenn</strong></td>
<td>M.S., Economics</td>
</tr>
<tr>
<td>B.S., Aviation Management</td>
<td>City College</td>
<td>City College</td>
</tr>
<tr>
<td><strong>Candace Agonafir</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>City College</td>
<td></td>
</tr>
</tbody>
</table>

### NOAA-CREST African-American Scholars 2016-2019

![Pie chart showing the distribution of degrees among NOAA-CREST scholars, with Bachelor's, Master's, and PhD categories.](chart.png)
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:
Undergraduate (UG) 2nd semester sophomores,
Graduates (G) in Masters programs, and 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
G: $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]