

# VA-NC ALLIANCE AIMS TO DIVERSIFY STEM WORKFORCE

The Virginia–North Carolina Louis Stokes Alliance for Minority Participation (VA-NC Alliance) strives to diversify the science, technology, engineering, and mathematics (STEM) workforce, by supporting underrepresented minority students in their pursuit of STEM baccalaureate degrees, and subsequently graduate school and employment opportunities.

Named for the late Congressman Louis Stokes, the National Science Foundation (NSF) Louis Stokes Alliances for Minority Participation Program provides funding to the VA-NC Alliance and forty-plus other Alliances across the United States. Each Alliance provides opportunities for students, builds community among its cohort members, increases engagement between partner schools, and fosters academic and professional networks.

UVA leads the VA–NC Alliance whose partners include Historically Black Colleges and Universities (HBCUs), Predominately White Institutions, community colleges, and one federal laboratory. In addition to UVA, the twelve Alliance partners are:

**BENNETT COLLEGE, ELIZABETH CITY STATE UNIVERSITY (ECSU), GEORGE MASON UNIVERSITY, JOHNSON C. SMITH UNIVERSITY, THE NATIONAL RADIO ASTRONOMY OBSERVATORY, OLD DOMINION UNIVERSITY, PIEDMONT, VIRGINIA COMMUNITY COLLEGE (PVCC), SAINT AUGUSTINE’S UNIVERSITY, VIRGINIA COMMONWEALTH UNIVERSITY, AND VIRGINIA TECH.**



***Phil Arras***



***Bryam Ayvar***

During the summer of 2021, the Alliance hosted its twelfth summer research program and second virtual experience (necessitated by the ongoing COVID-10 pandemic).

One of the Alliance’s dedicated faculty members, Phil Arras, professor of Astronomy, worked with University of Virginia student Bryam Ayvar and Virginia Tech undergraduate Emily Frank on research into the movement of photons in the atmosphere of exoplanets and nonlinear wave interactions.

Alma Salisbury, a student from partner school Elizabeth City State University, an HBCU located in North Carolina, conducted research closer to the earth with Professor Lauren Simkins from the Department of Environmental Science. Professor Simkins, once an LSAMP student herself, remarked on the impact of the program on her and her students, saying: "Serving as a faculty adviser in the VA-NC Alliance Summer Research Program was a wonderful experience. Alma learned the research tools remarkably fast, which allowed her to contribute meaningfully to the Ice & Ocean Group's research. She also was an active participant in our group discussions on environmental justice, anti-racism in higher education, ethical data management, and impacts of settler colonialism in Antarctica, where some of us conduct our research. I feel as if I have come full circle from being an Alliance Scholar in Oklahoma as an undergraduate student and in California as a graduate student. I am eager to remain involved in the program each summer."



**"WORKING WITH THE ICE AND OCEAN GROUP OVER THE SUMMER INCLUDED STIMULATING GROUP MEETINGS AND NEW UNDERSTANDING ABOUT ASPECTS OF ENVIRONMENTAL SCIENCE. I WAS ABLE TO EXPAND MY KNOWLEDGE IN PROGRAMS AND CODING LANGUAGES IN THE SHORT EIGHT WEEKS THIS PAST SUMMER."**

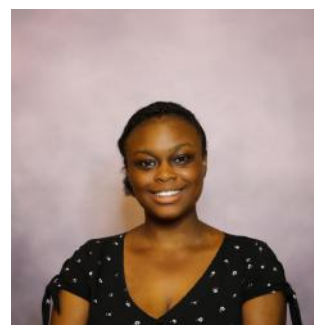
***Alma Salisbury***

In addition to engaging students from HBCUs, one of the Alliance's goals is to increase the number of students transferring from community colleges to four-year institutions. To that end, the summer program recruits students from another Alliance partner school located in Charlottesville: Piedmont Virginia Community College (PVCC). Liam Kidd, who transferred from PVCC to UVA in fall 2021, engaged in a research project with Gary Koenig, associate professor in the Department of Chemical Engineering. "Without my participation in this summer's program, I would have been lacking vital information on various graduate degree programs. It was a tough decision but the program helped me decide to pursue a graduate degree from the University of Virginia. My short time here as an undergraduate has been exciting, challenging, and formative so I look forward to the next chapter in my education," said Kidd.

Ireolu Orenuga also worked with Koenig researching a potential high energy density battery technology.

**"THE VA-NC ALLIANCE SUMMER RESEARCH PROGRAM PROVIDED ME WITH A LOT OF RESOURCES AND INFORMATION ABOUT GRADUATE SCHOOL PROGRAMS THAT I WAS PREVIOUSLY COGNIZANT OF. AFTER THIS PROGRAM, I NOW INTEND TO PURSUE MY MD-PHD IN BIOCHEMISTRY, AND I FEEL MORE THAN ADEQUATELY PREPARED TO DO SO. "**

***Ireolu Orenuga***



From 2007 to 2020, the Alliance has seen a 315% increase in the number of STEM degrees earned by underrepresented students at its partner schools. During this same period, the number of underrepresented students enrolled at its partner schools increased by 207%.