



NSF
NATIONAL SCIENCE FOUNDATION

EHR
DIRECTORATE FOR EDUCATION AND HUMAN RESOURCES

HRD
DIVISION OF HUMAN RESOURCE DEVELOPMENT

HRD PROGRAMS



ADVANCE
Organizational Change for Gender Equity
in STEM Academic Professions




AGEP
Alliances for Graduate Education and
the Professoriate



CREST
Centers of Research Excellence in Science
and Technology

ISSUE 2

FEBRUARY
2021



HBCU-UP
Historically Black Colleges and
Universities-Undergraduate Program



ECR
EHR Core Research



HSI
Improving Undergraduate STEM
Education: Hispanic-Serving Institutions



LSAMP
Louis Stokes Alliances for Minority
Participation



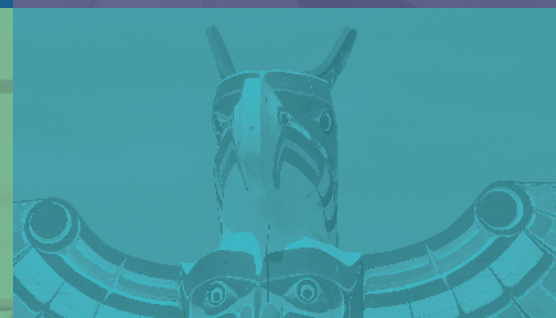
NSF INCLUDES
Inclusion across the Nation of Communities of
Learners of Underrepresented Discoverers in
Engineering and Science



PAEMST
Presidential Awards for Excellence in
Mathematics and Science Teaching



PAESMEM
Presidential Awards for Excellence in Science,
Mathematics, and Engineering Mentoring



TCUP
Tribal Colleges and Universities Program

Letter from the Leadership

FEBRUARY 2021



Dr. Diana Elder

Dear Friends of NSF:

If a National Science Foundation (NSF) program could be deemed a legacy activity, then surely its *Historically Black Colleges and Universities—Undergraduate Program (HBCU-UP)* falls into that category. The current HBCU-UP program portfolio is well-situated within the history of NSF support for minority-serving institutions.

In Fiscal Year (FY) 1972, NSF launched the first programmatic activity for HBCUs. In FY1976, NSF initiated a major reorganization and announced two new programs, *Minority Institutions Science Improvement*, and the *Minority Institutions Graduate Traineeships*.

Fast forward four decades, and today's HBCU-UP is an improved version of its forerunners, providing support to develop, implement, and study innovative approaches for making dramatic improvements in the STEM scholastic preparation and research success of HBCU undergraduate students. Key to this goal is the program's support for increased research capacity of science, technology, engineering, and mathematics (STEM) faculty; evidence-based leadership and professional development of faculty; research capacity building; and STEM teacher preparation.



Dr. Claudia Rankins and son,
Dr. Falcon Rankins

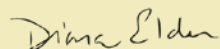
Our newsletter this month will provide you with several examples of the superb education and research work happening at HBCUs across our nation. As well, we know you will join us in applauding the more than 12 years of excellent stewardship of HBCU-UP by Dr. Claudia Rankins. Claudia's final day as a NSF program director was December 31, 2020. She has retired from NSF, but her legacy is strong and enduring.

Claudia joked with staff at her retirement celebration that her new boss is her beloved son, Falcon Rankins—a doctoral recipient in educational research and evaluation from Virginia Commonwealth University. Claudia is the premier example of professional acumen and love of family—we are certain she will enjoy reporting to her very talented son! Her "Zoom" retirement celebration was attended by more than 60 staff from around NSF, all with tears of joy for having had the delight and privilege to know and work with her for so many years.

We are pleased to announce that Dr. Carleitta Paige-Anderson has joined the staff as a permanent program officer for HBCU-UP. Carleitta comes to us from Virginia Union University where she was Director of the Center for Undergraduate Research and the University's Vice President for Student Development and Success.

We hope you enjoy this month's acclamation for the HBCU-UP, a program that stands head and shoulders with the best that NSF can offer you—our investigators, colleagues, and stakeholders.

Sincerely yours,



Dr. Diana Elder

Director

NSF Division of Human Resource Development

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Additional Information

- HBCU-UP Solicitation Information
- Featured Program In Upcoming March 2021 Newsletter

Historically Black Colleges and Universities-Undergraduate Program

HISTORY



Our February issue is also dedicated to Black History Month in the United States, created in 1926 when historian [Carter G. Woodson](#) and

the Association for the Study of Negro Life and History announced the second week of February to be “Negro History Week.”

Woodson chose this week because it coincided with the birthday of Abraham Lincoln on February 12 and of Frederick Douglass on February 14, both dates for which Black communities had celebrated since the late 19th century. The first celebration of the modern Black History Month took place at Kent State University from January 2 to February 28—in 1970.

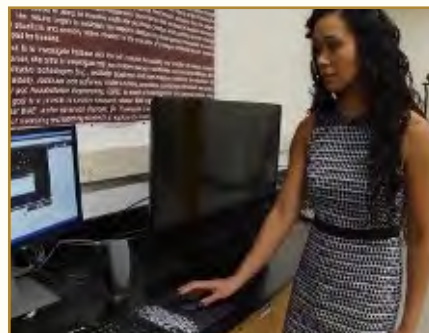
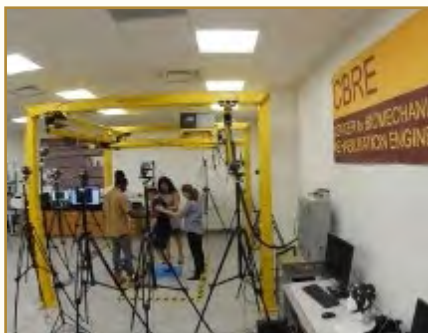
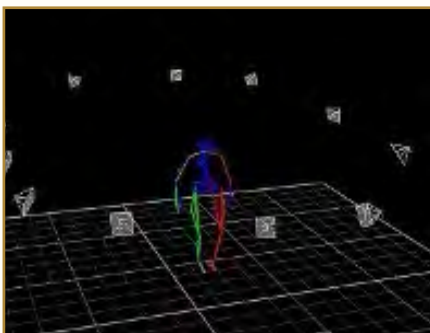
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To help increase the number of STEM undergraduates at HBCUs, NSF has established the HBCU STEM Undergraduate Success Research Center.

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In cooperation with the University of the District of Columbia, NSF produced “Research immerses HBCU undergrads in biomedical engineering.” We hope you enjoy this report on research by an HBCU that demonstrates commitment to human welfare.

 [HBCU bio engineering project](#)



INTERESTING FACTS



Historically Black colleges and universities have been at the center of the American story for more than 180 years—academically, socially, and economically. Browse for a moment the [180 years of excellence by HBCUs](#), and do not miss the video by Henry Louis Gates Jr.

HBCUs enroll about nine percent of Black undergraduates in the U.S., but they graduate a significantly higher percentage in critical fields such as engineering, mathematics, and biological sciences. To help increase the number of STEM undergraduates at HBCUs, NSF has established the [HBCU STEM Undergraduate Success Research Center](#). Led by researchers at Morehouse College, Spelman College and Virginia State University, the Center will study and model the broadening participation success of 50 out of the nation’s 101 HBCUs. The study will also help the broader university community understand how to improve success rates for underserved populations.

The National Science Foundation’s governing body—the National Science Board—has had connections to HBCUs since the Board’s beginning: Dr. John Warren Davis—former President of West Virginia State College from 1919-1953—joined the board as a charter member in its inaugural year of 1950 and served through 1956 [John W. Davis](#). Dr. [Robert Percy Barnes](#) also a charter member on the inaugural board, served as the Chairperson of the Howard University Department of Chemistry. Dr. Victor R. McCrary, Vice President for Research and Graduate programs, University of the District of Columbia, currently serves on the board through May 2022.

ACCOMPLISHMENTS

Here we pause for a moment and pay tribute to the remarkable management of HBCU-UP during Dr. Claudia Rankins' 12 years at NSF.

She authorized nearly 1,000 awards, large and small, totaling approximately \$400 million to HBCUs, and that is not insignificant for these institutions. Claudia remarked that "I was happy to observe a shift in attitude at NSF from thinking that research awards should only go to faculty at research intensive institutions to realizing that faculty at ALL institutions should be supported because they do great work, as researchers and as educators. My hope is that we keep making progress in that area and that the Education and Human Resources Directorate portfolio becomes even more inclusive of all faculty at all institutions."

STORIES OF IMPACT

The HBCU-UP program has successfully introduced new STEM programs at HBCUs. For example, **Harris-Stowe State University** in St. Louis, Missouri, had no STEM degree programs until a 2008 HBCU-UP grant provided resources for creation of biology and mathematics B.S. degree programs beginning in Fall 2010. HBCUs have awarded a large share of bachelor's degrees earned by African American students in STEM. Take a moment to explore the NSF data tables for the latest information on [minority degree completion](#).



“
HBCUs have awarded a large share of bachelor's degrees earned by African American students in STEM.
”

STORIES OF IMPACT

The University of the Virgin Islands (UVI) is the only HBCU not located in the continental U.S. The university was awarded an HBCU-UP *Research Scholars Program* as part of the university's Emerging Caribbean Scholars Program. Students selected as HBCU-UP STEM scholars are assigned a faculty mentor; receive stipends to work on research projects during the school year and summer; and will travel to scientific meetings. Students also prepare for and take the Graduate Record Exam, as well as attend seminars and apply for research experiences off-campus.

Specific objectives of the project (which is scheduled to conclude in June 2021) are increasing by 15% the retention and persistence rates for those STEM students who struggle early in their college careers; and increasing by 10% the overall persistence and graduation rates for STEM students. This is a one-of-a-kind research activity for UVI. Read more about this and other activities at [UVI HBCU-UP Research Scholars](#).

Mississippi Valley State University - Implementation Project: Using Mathematics to Transform the STEM Undergraduate Landscape

The goal of the Mississippi Valley State University (MVSU) implementation project is to increase African American participation in STEM disciplines. This implementation project focuses on the professional development of local pre-service and in-service teachers in the Mississippi Delta public school system. This project also has a goal of preparing students who are veterans of the U.S. Armed Services to major in STEM disciplines, and to meet that goal MVSU will include a veterans' initiative.

As of 2017, 20 Mississippi Delta schools had 88 teachers participate in project activities, including 43 MVSU students as pre-service teachers (at least 32 of the 43 have become teachers). The dual enrollment initiative at the university has expanded from two schools and 23 students to nine schools and 248 students. As well, the computer science program at MVSU is now accredited and the mathematics education program is nationally recognized. Read more about the excellent academic programming at [MVSU](#).

Lawson State Community College, a two-year HBCU in Birmingham, Alabama received HBCU-UP support for its 2-Pathways into STEM project (*2-Pi STEM*) in 2011. The three primary goals of the *2-Pi STEM* program were to: (1) provide cross curricular mentoring and learning communities for STEM students to improve persistence and efficacy in STEM courses; (2) create STEM enrichment and academic enhancement programs for high school and undergraduate students; and (3) implement a college bridge program for incoming freshmen/sophomores and transfer students.

Lawson State's Interim President, Dr. Cynthia Anthony, invites you to review the *STEM Pipeline: STEM Scholar Profiles & Highlights 2016 Report* that provides an overview of her institution's *2-Pi STEM* program--including scholar profiles, research, college transfer and career updates. Lawson State Community College is proud of the outcomes of the *2-Pi STEM* program and continues to be a leader in STEM initiatives, partnerships, and innovative programs to enhance the quality of undergraduate science, technology, engineering, and mathematics education at Historically Black Colleges and Universities.



HRD

NEWSLETTER

INFORMATION

The current solicitation for those wishing to submit HBCU-UP proposals is [NSF 20-559](#). Current funding tracks in the solicitation are:

- Targeted Infusion Projects (TIP)
- Broadening Participation Research (BPR)
- Research Initiation Awards (RIA)
- Implementation Projects (IMP)
- Broadening Participation Research Centers (BPRC)

LOOKING FORWARD

The March 2021 newsletter will feature the NSF ADVANCE program which provides grants to understand and address gender-based, systemic inequities impacting STEM faculty in U.S. institutions of higher education. In 2021, ADVANCE is celebrating its 20th anniversary.

National Science Foundation

Directorate for Education
and Human Resources

Programs of the
Division of Human
Resource Development

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WHERE DISCOVERIES BEGIN