

Funded by NSF HBCU-UP

Morehouse College
Virginia State University
Spelman College



HBCU STEM UNDERGRADUATE SUCCESS RESEARCH CENTER

HBCU STEM Undergraduate Success (STEM-US) Research Center

PROJECT TEAM MEMBERS



Lyncurgus L. Muldrow, Ph.D.
STEM-US Executive Director
Morehouse College



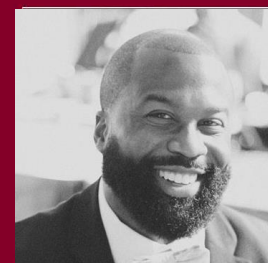
Keith Howard, Ph.D.
Associate Provost
Academic Affairs
Morehouse College



Lawrence Blumer, Ph.D.
Professor
Department of Biology
Morehouse College



Danielle Dickens, Ph.D.
Assistant Professor
Department of Psychology
Spelman College



Derrick Bryan, Ph.D.
Associate Professor
Sociology Department
Morehouse College



Shondrieka N. Lamb, M.S.
STEM-US Assistant Director
Morehouse College



Cheryl Talley, PhD
Professor of Neuroscience
Department of Psychology
Virginia State University

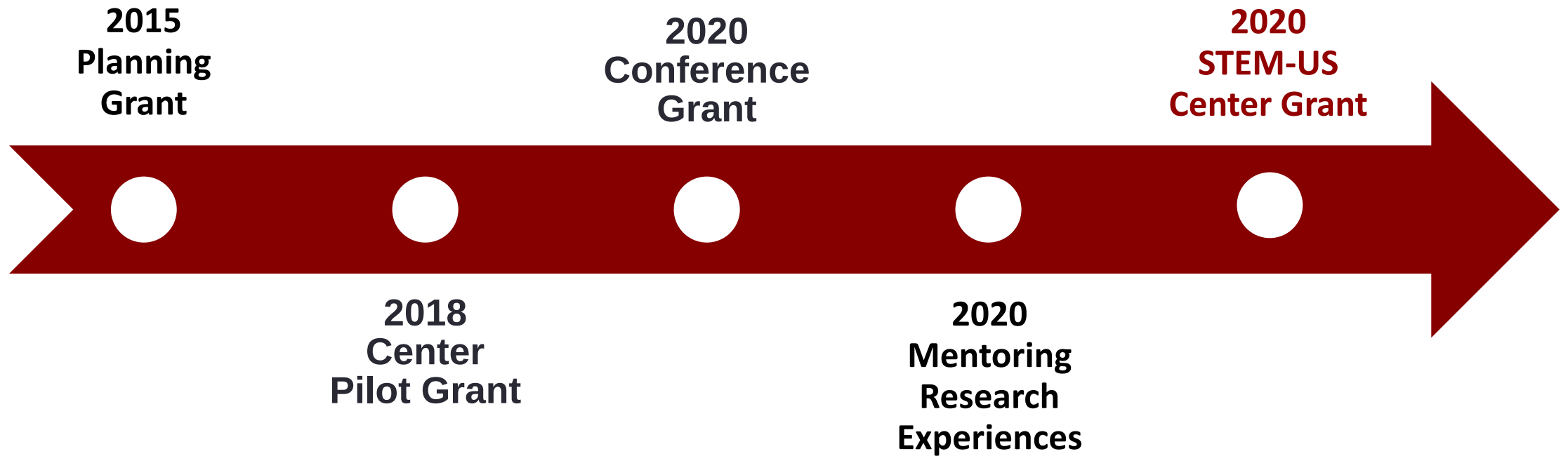
STEM-US Mission Statement



The STEM-US Center mission is rooted in the reality that despite the extremely positive contributions HBCUs have made in STEM education, a deficit-oriented discourse concerning HBCUs' contributions to society still exists.

To understand and tell the stories of HBCUs through convergence research for us and the nation; thereby, documenting the legacy of excellence in STEM education at HBCUs and contributing to future educational innovation.

History of STEM-US Center Funding



A National Science Foundation, HBCU Undergraduate Program
Broadening Participation Research Center Grant

Center Functions



- **Common Research Goal** – Study STEM Success of HBCUs and HBCU Students
- **Phenomenological Variant of Ecological Systems Theory (PVEST)** - Common Social Science Theoretical Framework to Analyze How and Why
- **Analytic Hub** – Integrates PVEST Research with Education, Knowledge Transfer and Outreach
- **Convergence Research** – Social Science Works with Diverse STEM Projects
- **Community-Based Participatory Research (CBPR)** – Bidirectional Knowledge Transfer with HBCU Partners
- **Research Projects** – Six core research projects

STEM-US Research Projects



Research Projects	Description
Analytic Hub	Integrates center-wide PVEST research with education, knowledge transfer and outreach. (C. Talley, D. Dickens, A. Salter, D. Bryan)
Study of 25 HBCUs	Comprehensive data analysis of HBCUs and students taking STEM-US Assessments. (C. Talley)
Intersectionality	Intersectionality studies, such as gender, on HBCU students from all STEM fields. (D. Dickens)
Project Knowledge Mentoring Intervention	Studies mentoring program for retention of students in all STEM majors at VSU. (C. Talley)
Scientific Literacy	Investigates and scales utilitarian scientific literacy curriculum to facilitate and understand skills, attitudes and behaviors necessary for success of freshmen STEM majors. (L. Muldrow)
Course-Based Undergraduate Research Experience	Trains faculty at HBCUs to develop and implement CUREs and investigates outcomes in different STEM disciplines. (L. Blumer, S. Younge)
Academic Pipeline - THRIVE	Inventory of STEM programs at HBCUs resulting in knowledge transfer, outreach and data analysis. (R. Mason, C. Byrd)

Accomplishments (August 2018 – April 2021)

Research

- National research: 193 faculty, staff and administrators; 55 HBCUs, 10 other partner institutions
- 5 team research projects were launched at 20 different HBCUs around the country

Publications and Conferences

- 18 peer-reviewed publications
- Journal of Negro Education special edition
- Book titled *Academic Pipeline* in press
- 3 Book chapters and 2 book reviews
- 28 local and national conference presentations
- 3 National student awards

Education, Knowledge Transfer and Outreach

- 13 undergraduate students (5 from Morehouse), 8 graduate students, and 2 post-doctoral fellows, and 8 co-authored publications with faculty
- 6 newsletters disseminated to STEM faculty and stakeholders
- 3 educational webinar series
- STEM-US Annual Conference

STEM-US 2019 Annual Conference



Scientific Literacy Center

Skills, attitudes and behaviors necessary for success of freshmen STEM majors.

***Increases
Retention
in STEM***



Scientific**Literacy**Center

***Increases
Student
Success***



www.scientificliteracycenter.org





Makerspace Exploration Center



DIY Student
Facility with
Tools for
Innovation,
Competitions
and
Entrepreneurship.



MakerWay

Student Club Competitions

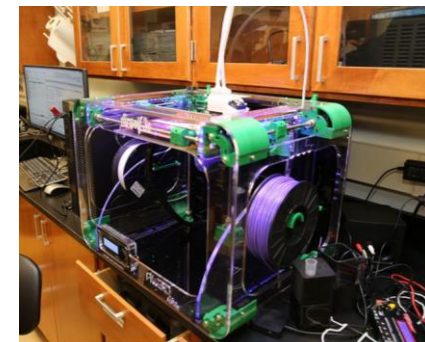
- NSF, AAAS
- NASA
- I AM 3D
- Toyota



Laser Cutter



www.morehousemakerspace.org



3D Printers