EXPLORE SCIENCE

National Aeronautics and Space Administration

hq-smd-bridge@mail.nasa.gov

NASA's SMD Bridge Program: A Co-created Program that Funds Faculty and Students at Under-resourced Emerging Research Institutions

Nicolle Zellner, Padi Boyd, Steven Villanueva, Vemitra Alexander, Daniella Scalice, Lalitha Balachandran, Jeremias Nuñez, Bri Hart, Eddie Gonzales, and Trena Ferrell

The NASA SMD Bridge Program is a set of funding opportunities for non-R1 institutions to partner with NASA

Top Takeaways…

01 NASA is committed to co-creating the program

02 Avirtual community workshop was held in October 2022

03 Important takeaways from community stakeholders were heard

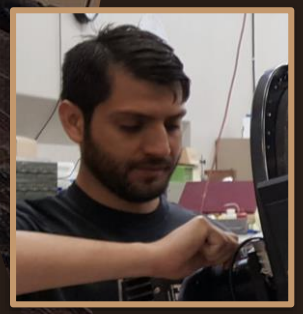
04 Funding for nascent and developed Bridge partnerships

05 Where we are now and what's coming next

The program is co-designed to expand access within the NASA workforce and within the US STEM communities

SMD Bridge Core Team (NASA Headquarters)

Name: Padi Boyd
Institution: NASA Goddard and NASA Headquarters
Bio: Padi is a passionate ally and advocate for diversity, equity, accessibility and inclusion with over 25 years of scientific, technical and managerial experience at NASA, including work in the Hubble Space Telescope, Swift, Kepler and TESS.



Name: Steven Villanueva
Institution: NASA Postdoctoral Management Fellow
Bio: Steven Villanueva is an exoplanet scientist who works to understand what role giant planets play in the formation of extrasolar systems around stars outside of our solar system. He has been active in SACNAS since his student days at OSU, and will focus on mentoring for the Bridge Program.

Name: Lalitha Balachandran
Institution: University of California, Santa Cruz
Bio: Fourth-year PhD student in Linguistics

Name: Jeremias Nunez
Institution: University of Texas, Austin
Bio: Third-year undergraduate in anthropology

Former Interns

Name: Nicolle Zellner
Institution: Albion College & NASA's Planetary Science Division
Bio: Dr. Nicolle Zellner is the Herbert and Grace Dow Endowed Professor of Science at Albion College in Albion, MI, where she teaches introductory and advanced astronomy and physics courses. She previously served as an IPA in the Planetary Science Division.

Name: Vemitra White-Alexander
Institution: OSTEM (SE Regional Office) MSFC
Title: Program Specialist
Bio: Her research interests include STEM engagement, URM students' persistence and retention in STEM, STEM education and outreach. Previous Director for Educational Outreach Bagley College of Engineering at Mississippi State University; Summer Bridge Program Research Assistant for the college of engineering Diversity Programs and Student Development.

Name: Daniella Scalice
Institution: NASA ARC
Bio: Education and Communication Lead for the NASA Astrobiology Program & Community-Based Education Lead, NASA's MAIANSE Program. Daniella builds relationships and partnerships with Indigenous communities, and advocates within NASA for tribal sovereignty and self-determination.

Paulette Woods, Trena Farell

SMD Bridge Program Workshop Organizing Committee

Weeklong virtual workshop 10/2022; Final report published 5/23

Bri Hart
Diversity Program Manager
American Physical Society

Edward Gonzales
DEIA lead for Heliophysics
NASA Goddard

Clayton Clark
Associate Dean
for Academic Affairs
NC A&T

Vemitra White-Alexander
STEM Education Specialist
NASA Marshall & Stennis

Regina Jorgenson
Observatory Director
Maria Mitchell Observatory

Jesus Pando
Chair of Physics & Astrophysics
Department
DePaul University

Carl A. Moore Jr.
Associate Professor
of Engineering
FAMU-FSU

Marianne Smith
Senior Education Faculty
Oak Crest Institute of Science

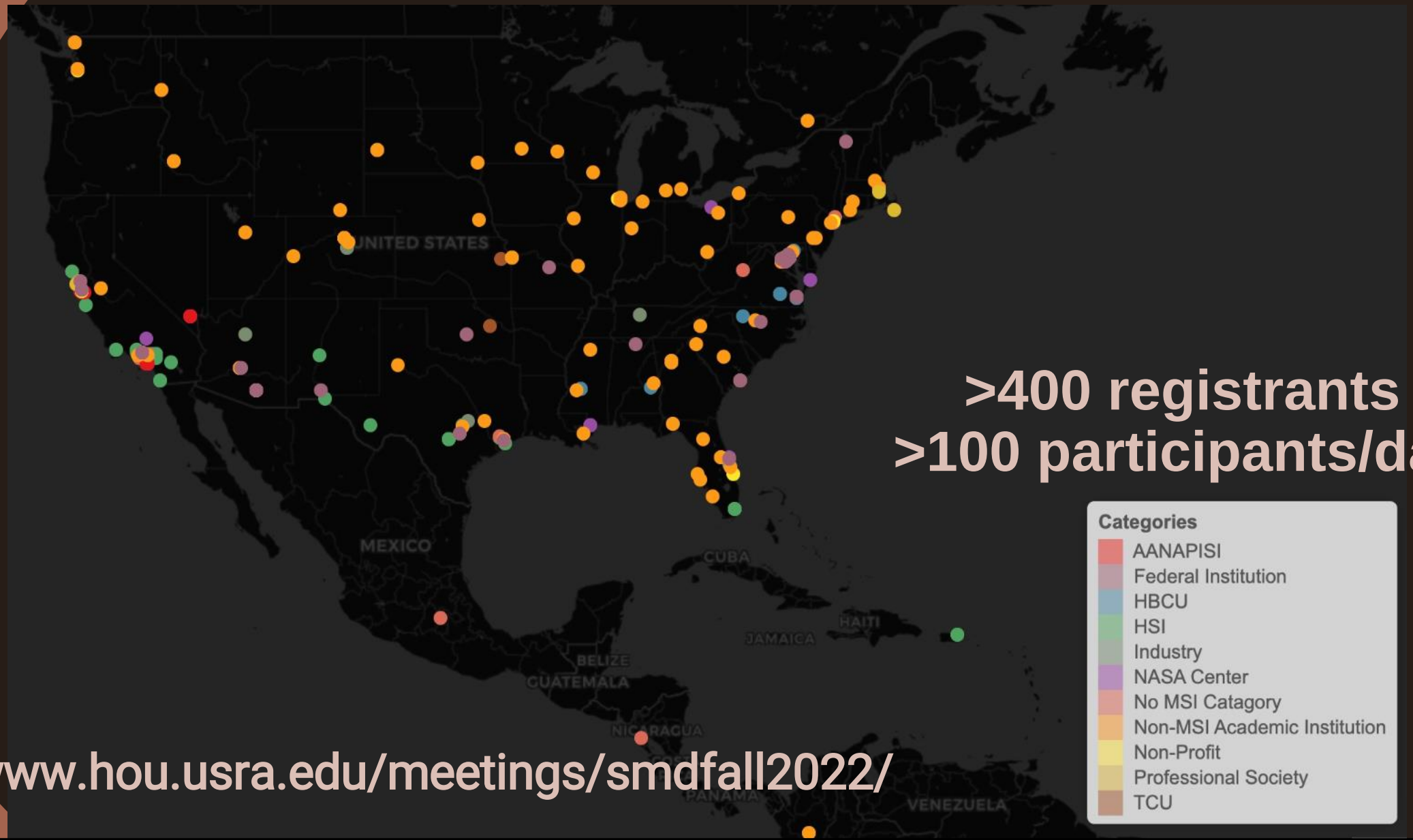
Noel Gardner
Director of THEE Aristocrats STEM
Jackson State University

Ronald S. Gamble
Assistant Research Scientist
NASA Goddard SFC

Alvin Smith
Manager for Planetary
Protection
NASA Jet Propulsion
Laboratory

Carol Hood
Professor of Physics
Associate Director,
Cal-Bridge
CSUSB

Institution-specific Workshop Registration

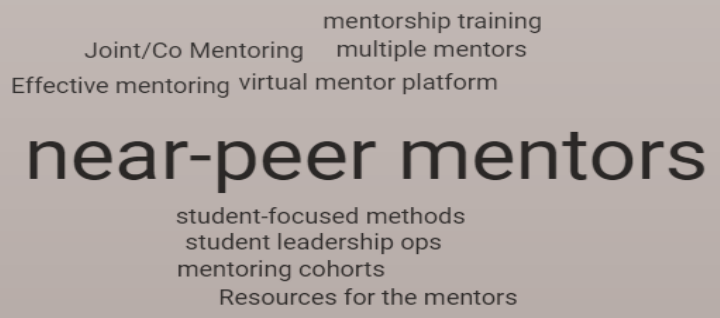


>400 registrants
>100 participants/day

https://www.hou.usra.edu/meetings/smdfall2022/

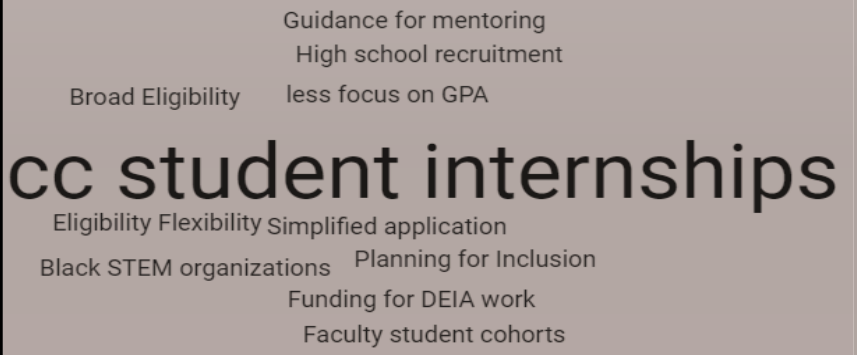
What one element would you like to see in NASA's SMD Bridge Program as it relates to…

STEM Mentoring



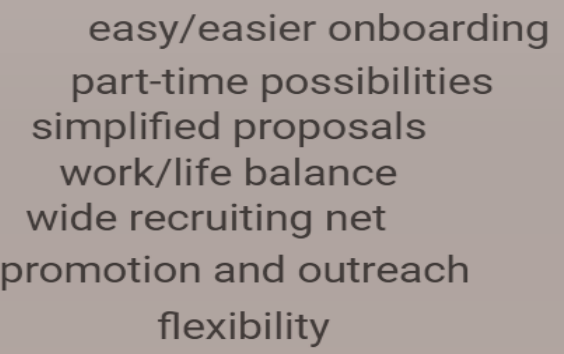
Early Career Perspectives

Community Colleges



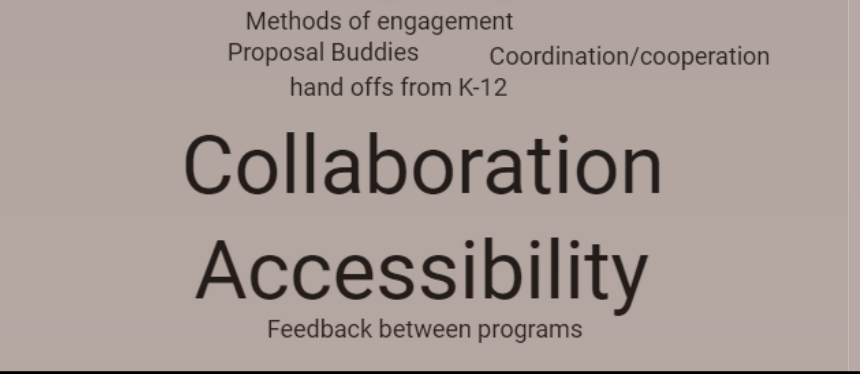
HBCU

Accessibility

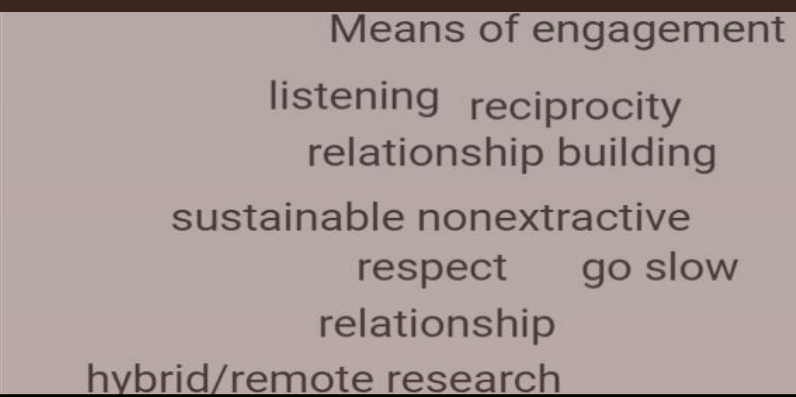


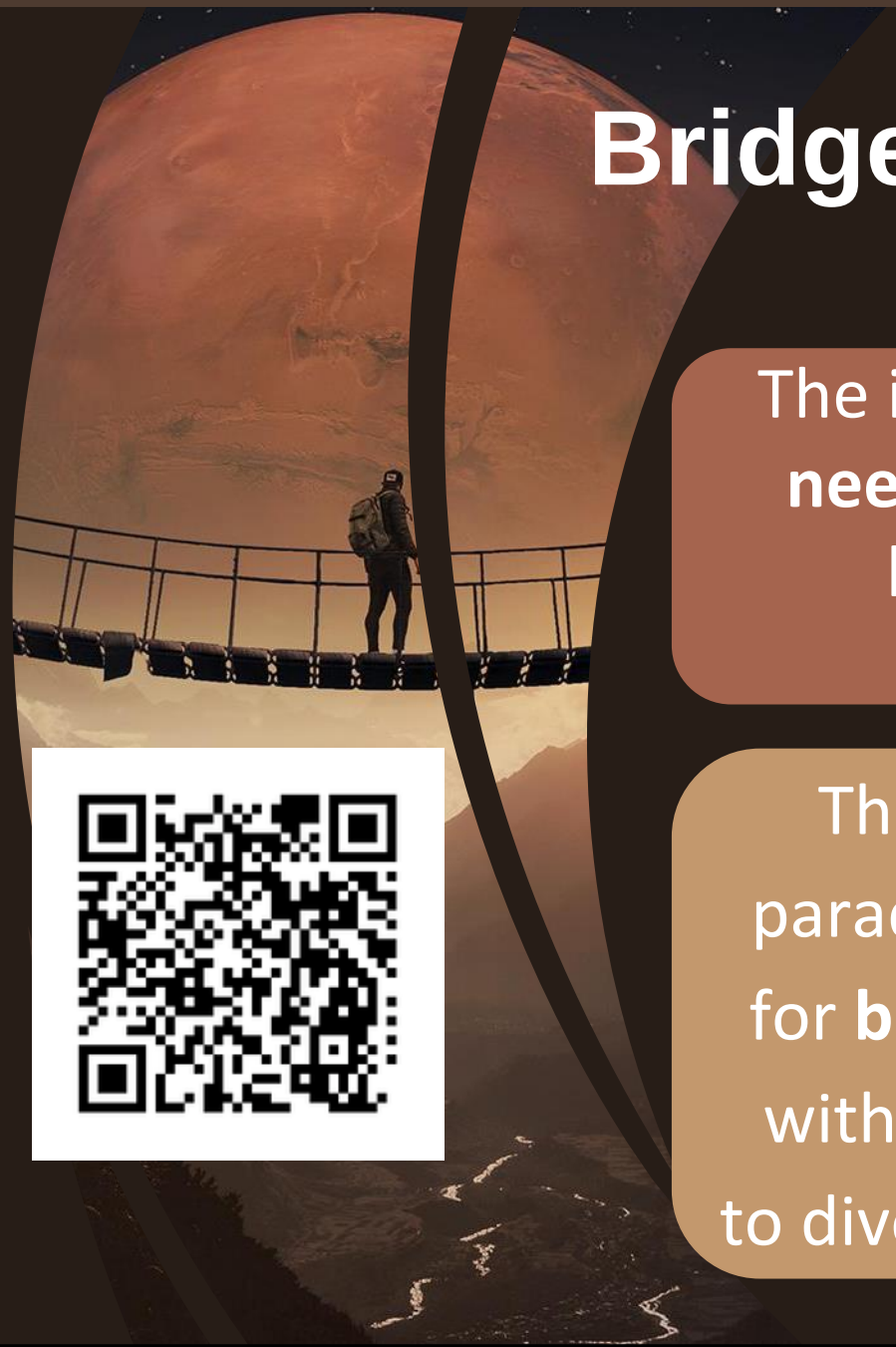
Hispanic Serving Institutions

NASA Existing Programs



AANAPISI





Bridge Program Workshop Report

Key Takeaway Messages

The ideal NASA Bridge Program would **center the needs** of students, faculty, and institutions that have been historically and systematically marginalized.

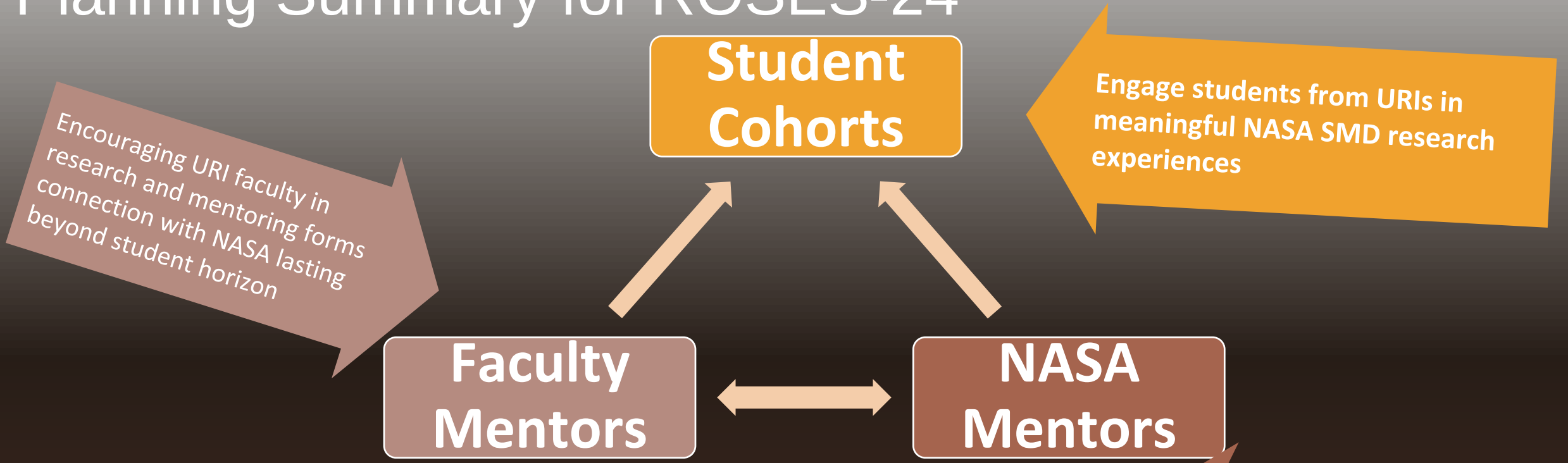
The ideal NASA Bridge Program would lead a paradigm shift by assuming primary responsibility for **building impactful relationships/partnerships** with marginalized and underserved communities to diversify its workforce and the STEM community.

Novel Features of the Bridge Program

- Support for new and established partnerships
  - Offer Seed Funding to get teams started (6 pg proposal)
  - Communicate with potential PIs via webinars and office hours
  - Plan Networking Events and Symposia to foster partnerships and build community
- Flexibility for students and faculty at URIs
  - Small (6 pg), Large (10 pg), and Key (15 pg) proposals
  - Flexible due date (open through 3/2025; 2-3 reviews per year)
  - Partnership and research descriptions to meet needs of team (gap years, part-time students, etc.)
- Expect, recognize and reward excellence in mentoring
  - Mentoring plan is required element of the proposal
  - Funding to work with mentoring expert

(majority of funding: students, faculty and research capacity of URI; PI expected to be @URI but not required)

Planning Summary for ROSES-24



Proposal category (cost cap per year)	Number selected	Page Limit of Science Section
Seed Funding	>11 (2023)	6
Small ($150K)	~12	6
Large ($500K)	~3	10
Key ($2M)	~1	15

The Bridge does:

- create **long-term research and mentoring partnerships** between NASA researchers and faculty at institutions historically underfunded by NASA. We call these “Under-resourced Institutions” or URIs.
- fund teams **led by URI faculty and co-created with a NASA partner**.
- offer **paid research positions for URI students** on topics relevant to NASA’s Science Mission Directorate (SMD).
- have a call for proposals open: **F.23 SMD Bridge Program Seed Funding (BPSF)**
- focus on **partnership** between URI and NASA, **impacts**, and **mentoring**
- lead to a **full program** in ROSES-2024

The Bridge does not:

- support **individual students** on their academic journey
  - a faculty member must partner with a NASA participant, who jointly propose a research partnership involving student research experiences
- promise employment by NASA or related industry
- *require* participation from R1 universities
  - R1 people may participate as it enhances the research partnership
  - funding can be requested, so long as the majority of funding goes to URI
- *currently* connect to long-term mission commitments

Team Demographics

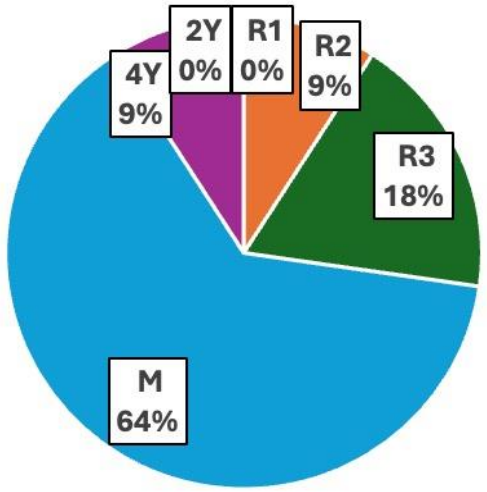
11 Teams Selected in Round 1

Schools w/ only Masters degrees
Many HBCUs, HSIs

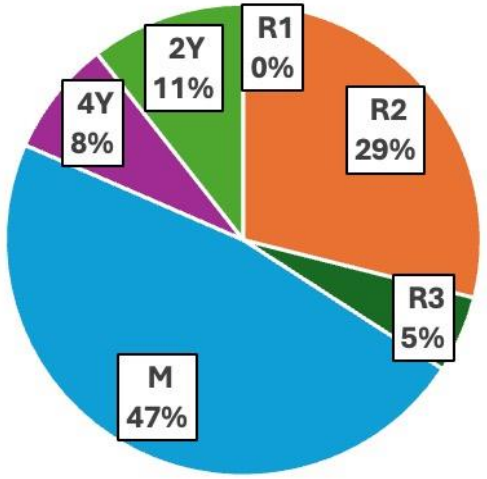
38 Proposals Submitted (2 Rounds)

Most are from Masters, R2 schools
Many HBCU, HSI proposals
Several CC, TCU proposals

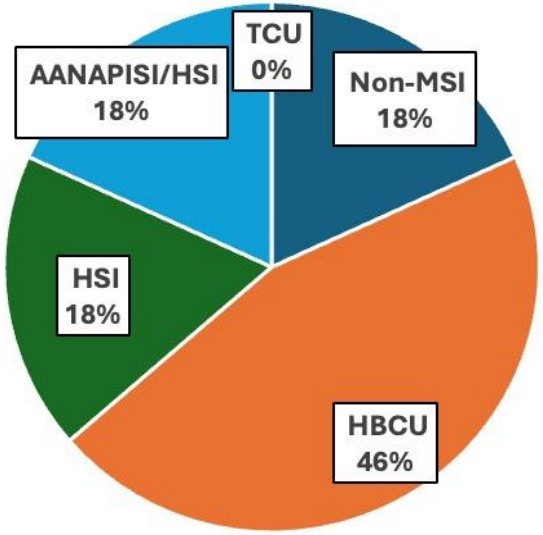
Selected Round 1 Carnegie



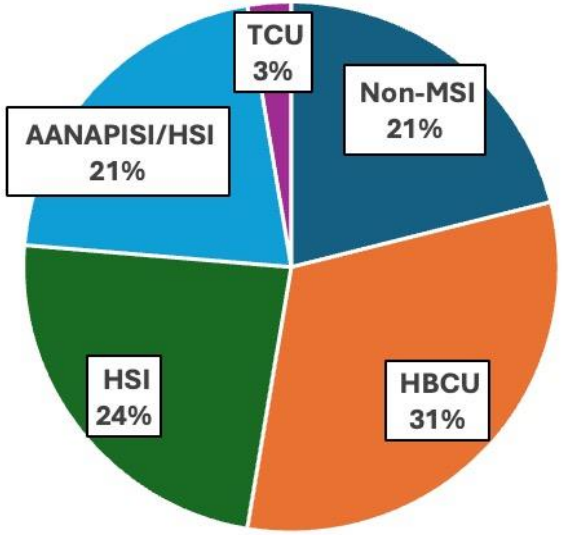
Submitted Total Carnegie



Selected Round 1 MSI



Submitted Total MSI



NASA SMD BRIDGE PROGRAM:
An Opportunity for Faculty and Students at non-R1s to Partner with NASA

https://science.nasa.gov/smd-bridge-program/latest-updates

Purpose: Faculty PI and NASA Co-I

Build and strengthen partnerships between NASA's Science Mission Directorate (SMD) and emerging research institutions, in any science, engineering, and/or technology area relevant to NASA SMD objectives, by focusing on paid student research experiences and faculty development.

Eligibility: Non-R1 faculty and NASA CS or contractor

Faculty at emerging research institutions include non-research intensive institutions (i.e., non-R1), and many MSIs, HBCUs, TCUs, PUIs, PBIs, HSIs and/or community colleges. Faculty fund their students as well.

Proposals must have a NASA Co-I.

Current Status:

Accepting proposals to ROSES23 F.23 Seed Funding

Planning for ROSES24 F.18 Full Program and F.20 Seed Funding

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Full Program

ROSES24 F.18

Call opening Spring 2024

Up to $2M/yr for up to 5 yr

Seed Funding

ROSES23 F.23 and ROSES24 F.20

Apply Now!!!

Up to $150k/yr for 1-2 yr

Community Engagement

Symposia, Webinars, Office Hours, Mentor Training

Simplified Proposals, Reimagined Review Process


https://science.nasa.gov/smd-bridge-program/latest-updates
hq-smd-bridge@mail.nasa.gov
THANK YOU!