EXPLORE SCIENCE

hq-smd-bridge@mail.nasa.gov





National Aeronautics and Space Administration

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...



NASA is committed to cocreating the program



Avirtual community workshop was held in October 2022



Important takeaways from community stakeholders were heard





04

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: 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: 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



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

Former Interns

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.



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

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

>400 registrants >100 participants/day

Categories AANAPISI Federal Institution HBCU HSI Industry NASA Center No MSI Catagory Non-MSI Academic Institution Non-Profit Professional Society TCU

STEM Mentoring

mentorship training Joint/Co Mentoring multiple mentors Effective mentoring virtual mentor platform

near-peer mentors

student-focused methods student leadership ops mentoring cohorts Resources for the mentors

Community Colleges

Guidance for mentoring High school recruitment

Broad Eligibility less focus on GPA

cc student internships Lo

Eligibility Flexibility Simplified application Black STEM organizations Planning for Inclusion Funding for DEIA work Faculty student cohorts

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

HBCU

Corporate incubator prog Productive Partnerships local engagement

Collaboration

ernships Long-Term Support

effective advertising systemic DE&I

codevelopment

simplified proces pathways partnerships

development opportunites

Diversity Consistency

Early Career Perspectives

Incusivity at all levels

Quality mentorship Inclusive definition career advancement Guidance Job Shadowing Early navigating USAjobs.gov

Accecible language mentoring Clarity - facility

intro to many career opts Travel funding awareness of "age-ism" Exposure to real career a Mentoring, Life coaching

Accessibility

easy/easier onboarding part-time possibilities simplified proposals work/life balance wide recruiting net promotion and outreach flexibility

Hispanic Serving Institutions

Comprehensive mentoring More publicity about HSI accessibility needs of HSIs needs of Hispanic student

Financial support

DACA Opportunities

Best practices: advising

NASA Existing Programs

Methods of engagement Proposal Buddies Coordination/cooperation hand offs from K-12

Collaboration

Accessibility

Feedback between programs

AANAPISI

Means of engagement

listening reciprocity relationship building

sustainable nonextractive respect go slow

relationship

hybrid/remote research

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)

Encouraging URI faculty in

connection with NASA lasting

beyond student horizon

research and mentoring forms

Planning Summary for ROSES-24

Student Engage students from URIs in Cohorts meaningful NASA SMD research experiences

to insure the research

supportive

environment is inclusive and

Faculty	
Mentors	



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

To be clear...

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



Selected Round 1 MSI



Team Demographics

11 Teams Selected in Round 1

Schools w/ only Masters degrees Many HBCUs, HSIs Submitted Total Carnegie



Submitted Total MSI



38 Proposals Submitted (2 Rounds) Most are from Masters, R2 schools Many HBCU, HSI proposals Several CC, TCU proposals

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

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

hq-smd-bridge@mail.nasa.gov



https://science.nasa.gov/smd-bridge-program/latestupdates

> 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-bridgeprogram/latest-updates

hq-smd-bridge@mail.nasa.gov

THANK YOU!

