



Launching Early-Career Academic Pathways in the Mathematical and Physical Sciences

LEAPS MPS

NSF 21-570

April 13, 2021

Not an official NSF

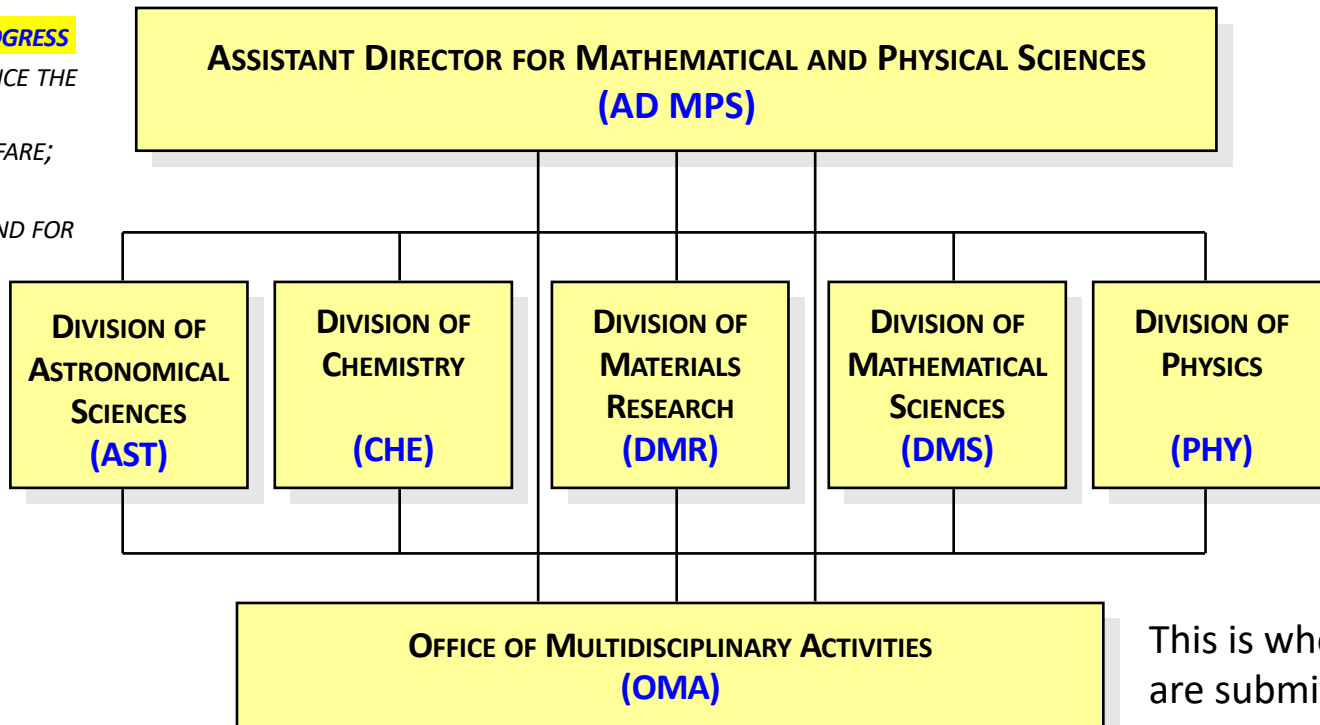
document



Mathematical and Physical Sciences

**TO PROMOTE THE PROGRESS
OF SCIENCE;** TO ADVANCE THE
NATIONAL HEALTH,
PROSPERITY, AND WELFARE;
AND TO SECURE THE
NATIONAL DEFENSE; AND FOR
OTHER PURPOSES.

— FROM THE NATIONAL SCIENCE
FOUNDATION ACT OF 1950 (
P.L. 81-507)



DR. SEAN JONES

These are the
science areas
and where
proposals will
be reviewed

This is where the proposals
are submitted



What is the LEAPS MPS program?

- Emphasis: helping to launch the careers of **pre-tenure faculty** in Mathematical and Physical Sciences (MPS) fields at **U.S. minority-serving institutions (MSIs)**, **predominantly undergraduate institutions (PUIs)**, and **Carnegie Research 2 (R2) universities. This is not an eligibility requirement.**
- Intent: initiating viable independent research programs for researchers attempting to launch their research careers in MPS supported fields
- Goal: achieving excellence through diversity and broadening participation to include members from groups underrepresented in the Mathematical and Physical Sciences, including Blacks and African Americans, Hispanics, Native Americans, Alaska Natives, and Native Hawaiians, and other Pacific Islanders.



Eligibility (PIs) and details

- Supports: Principal Investigators in MPS research disciplines early in their careers (**tenure track but pre-tenure**), particularly at the aforementioned institutions.
- Must not have been a PI, co-PI, or senior personnel on an NSF research grant, with the exception of Fellowship, Conference/Workshop, Equipment, Travel and Instrumentation proposals
- Principal Investigators must be U.S. citizens or lawfully admitted U.S. permanent residents at the time of proposal submission; visa-holders are not eligible.
- This LEAPS-MPS solicitation welcomes proposals from principal investigators who share NSF's commitment to diversity.
- **Awards are for 24 months and are up to \$250,000 total costs (direct plus indirect).**



Important Aspects of the Proposal

- Proposers must describe the research activities, and how the research performed is a) scientifically compelling and b) is on a path that will lead to future opportunities.
- Proposers must present a specific plan that shows how the proposed broadening participation activities will increase (1) the participation of scientists from underrepresented groups and (2) the numbers of such individuals that serve as role models for the scientific workforce of the future.
- A discussion of how the proposed research activities will facilitate development of a subsequent research plan for future proposals. Note that this does not fund time to write another proposal.



Project Description

- Project Description (not to exceed 15 pages) should contain:
- A brief description of the overall research goals.
- A detailed description of the proposed activities, including any preliminary data already available or a description of data or results that the PI plans to obtain.
- The relationship of the proposed activities to the PI's projected longer term research goals.



Project Description (2)

- A discussion of how those activities will facilitate development of a subsequent research proposal.
- A specific plan that shows how the proposed activities will increase (1) the participation of scientists from underrepresented groups in the areas of the Mathematical and Physical sciences supported by MPS, and (2) the numbers of such individuals that serve as role models for the scientific workforce of the future.



Supplemental Documents

Institution Letter:

- The submitting institution must provide a letter from the department chair or dean pledging their support for the proposed activities.
- If the PI is not in a tenure-track appointment, the institution must state its contractual agreement with the PI if the appointment period and requested grant award dates are not congruent.
 - This covers “tenure track equivalent” positions.



Supplemental Documents (2)

LEAPS-MPS Impact Statement (3 pages): The statement is an opportunity to provide information that will help a reviewer assess:

- i) the likely impact of the proposed project on the institutional research environment, especially in terms of enhancing research capabilities,
- i) the impact on the career of the faculty participant, and on the ability of the involved department to better prepare students for entry into advanced-degree programs and/or careers in science and engineering, including any provisions that will increase the participation of groups underrepresented in science and engineering.



Additional Review Criteria

For LEAPS proposals, both the **scientific merit of the proposed research** and the extent to which the proposed activities will **broaden participation of individuals from underrepresented groups** in the areas of the Mathematical and Physical sciences supported by MPS are of paramount importance.

Reviewers must evaluate the LEAPS-MPS Impact Statement and specifically the impact of the project on the institution's research environment and capability.

LEAPS-MPS proposals must also be judged on the **potential of the research initiation activities** to produce sufficient preliminary data to serve as the basis for a **competitive CAREER or standard individual-investigator research proposal to MPS**.



MPS contacts

- Sarah Higdon (AST), telephone: (703) 292-2541, email: shigdon@nsf.gov
- Rebecca Peebles (CHE), telephone: (703) 292-8809, email: rpeebles@nsf.gov
- Guebre X. Tessema (DMR), telephone: (703) 292-4935, email: gtessema@nsf.gov
- Tomek Bartoszynski (DMS), telephone: (703) 292-4885, email: tbartosz@nsf.gov
- Edmundo J. Garcia-Solis (PHY), telephone: (703) 292-4493, email: ejgarcia@nsf.gov