



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

LEAPS MPS

Proposal Deadline: Jan. 26, 2023
Every Fourth Thursday in January Thereafter

NSF 22-604

- James Higdon (AST), telephone: (703) 292-2398, email: jhigdon@nsf.gov
- Anne-Marie Schmoltner (CHE), telephone: (703) 292-4716, email: aschmolt@nsf.gov
- Souleymane O Diallo (DMR), telephone: (703) 292-8302, email: somardia@nsf.gov
- Yuliya Gorb (DMS), telephone: (703) 292-2113, email: ygorb@nsf.gov
- Kathleen McCloud (PHY), telephone: (703) 292-8236, email: kmcccloud@nsf.gov

MICHELLE BUSHEY, PROGRAM DIRECTOR
OFFICE OF MULTIDISCIPLINARY ACTIVITIES
DIRECTORATE FOR MATHEMATICAL AND PHYSICAL SCIENCES
NATIONAL SCIENCE FOUNDATION



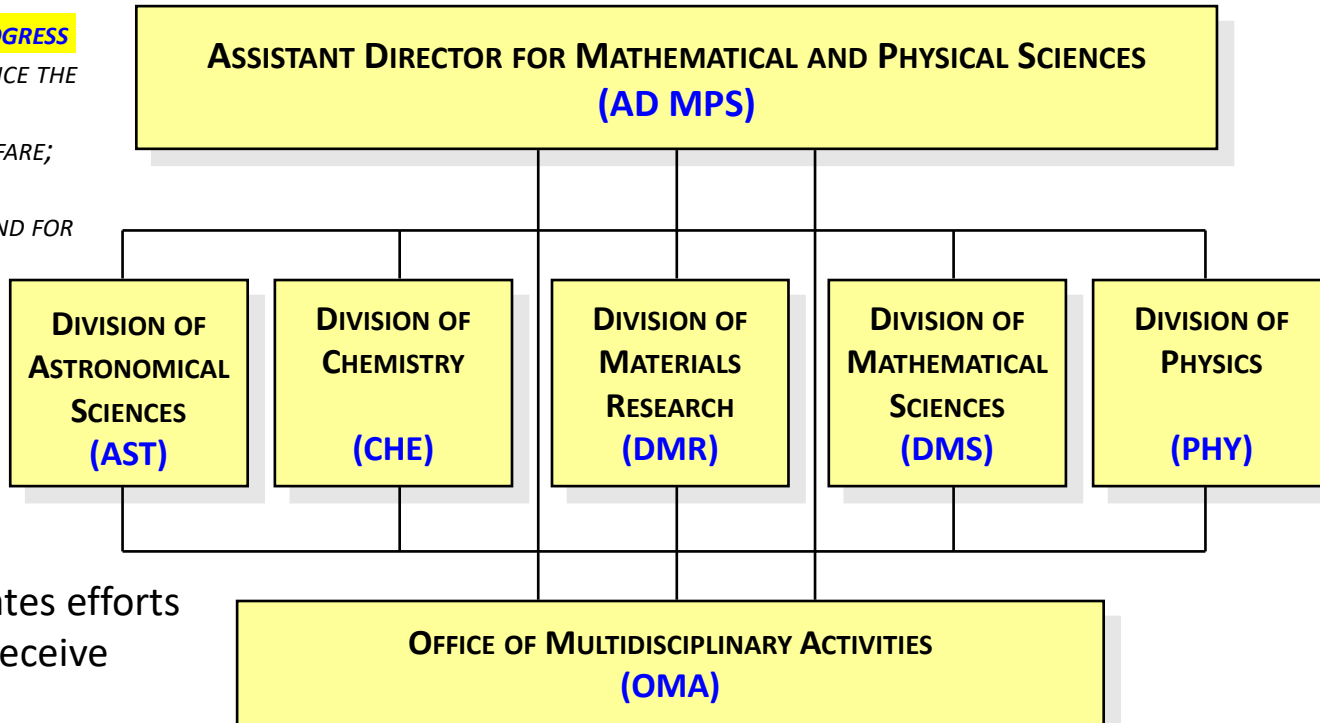
Mathematical and Physical Sciences



DR. SEAN JONES

**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)



The Divisions are the science areas and where proposals will be reviewed and where they are submitted 2

OMA coordinates efforts but does not receive Proposals



What is the LEAPS MPS program?

- **Emphasis:**

- helping to launch the careers of **pre-tenure/tenure track 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.**

Institution type is an emphasis, not a requirement.

- **Intent:** initiating viable independent research programs for early career researchers attempting to launch their research careers in MPS supported fields
- **Goal:** achieving excellence through diversity and broadening participation to include members from groups historically excluded and currently underrepresented in the Mathematical and Physical Sciences (including Blacks and African Americans, Hispanics, Latinos, Indigenous and Native Americans, Alaska Natives, Native Hawaiians, and other Pacific Islanders).



Eligibility (PIs) and details

- Hold a doctoral degree in the typical disciplines of the fundamental research areas supported by the Divisions of the Directorate for Mathematical and Physical Sciences.
- 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 or co-PI on an NSF research grant, with the exception of Fellowship, Conference/Workshop, Equipment, Travel, Instrumentation infrastructure, and Research Opportunity Award (ROA) grants.
- This LEAPS-MPS solicitation welcomes proposals from principal investigators who share NSF's commitment to diversity.
- Co-Principal Investigators are not permitted. Collaborations are permitted.
- **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 is
 - b) 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 the
 - a) participation of scientists from underrepresented groups as defined in this solicitation and
 - b) 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 grant 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 (if 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 proposed activities will facilitate development of a subsequent research proposal.
- A specific plan that shows how 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.



Project Description (3)

- Results from Prior support. Suggested maximum of 2 pages describing intellectual merit and broader impacts of prior NSF funding with research components. Only report on awards with research components such as Fellowships or ROAs, etc.
- Brief explanation of the purpose of any other awards (to be listed in the Current and Pending support) and the PI's role in the project(s). Clarify if the other awards are to primarily support research, instrumentation, educational efforts, etc.

Keep in mind, the scope of the work is for 24 months.



Supplemental Documents

LEAPS-MPS Impact Statement (2-3 pages): As a Supplementary Document. 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,
- ii) the impact on the career of the faculty participant,
- iii) the impact 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 (see solicitation).



Supplemental Documents

Institution Letter:

- The submitting institution must provide a letter from the department chair or dean pledging their support for the proposed activities and confirming the eligibility status of the PI. See solicitation for specific and allowed wording.
- 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.
- Other collaboration letters, if any, as needed.
 - See the solicitation for “tenure track equivalent” position definitions.



Additional Review Criteria

For LEAPS proposals, the **scientific merit of the proposed research, broader impacts of the activities**, 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 three specified components of the LEAPS-MPS Impact Statement – and-

LEAPS-MPS proposals must also be judged on the **potential of the research initiation activities to position the PI for a competitive CAREER or individual-investigator research proposal to MPS.**



MPS contacts

- James Higdon (AST), telephone: (703) 292-2398, email: jhigdon@nsf.gov
- Anne-Marie Schmoltner (CHE), telephone: (703) 292-4716, email: aschmolt@nsf.gov
- Souleymane O Diallo (DMR), telephone: (703) 292-8302, email: somardia@nsf.gov
- Yuliya Gorb (DMS), telephone: (703) 292-2113, email: ygorb@nsf.gov
- Kathleen McCloud (PHY), telephone: (703) 292-8236, email: kmcccloud@nsf.gov

LEAPS proposals are submitted for consideration to one of the five programs of the participating Divisions. See the solicitation for details.