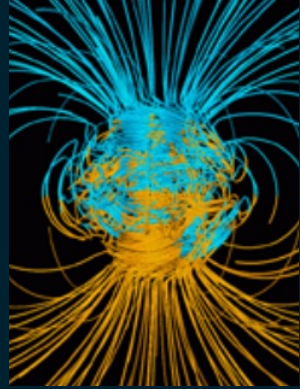
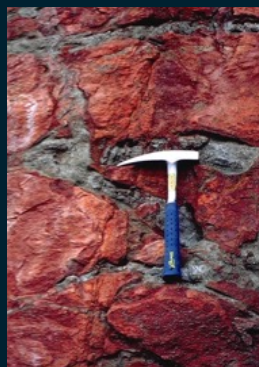
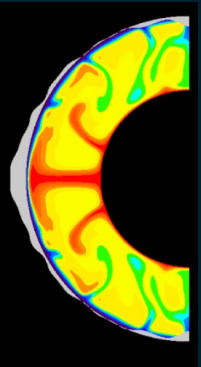


Petrology & Geochemistry

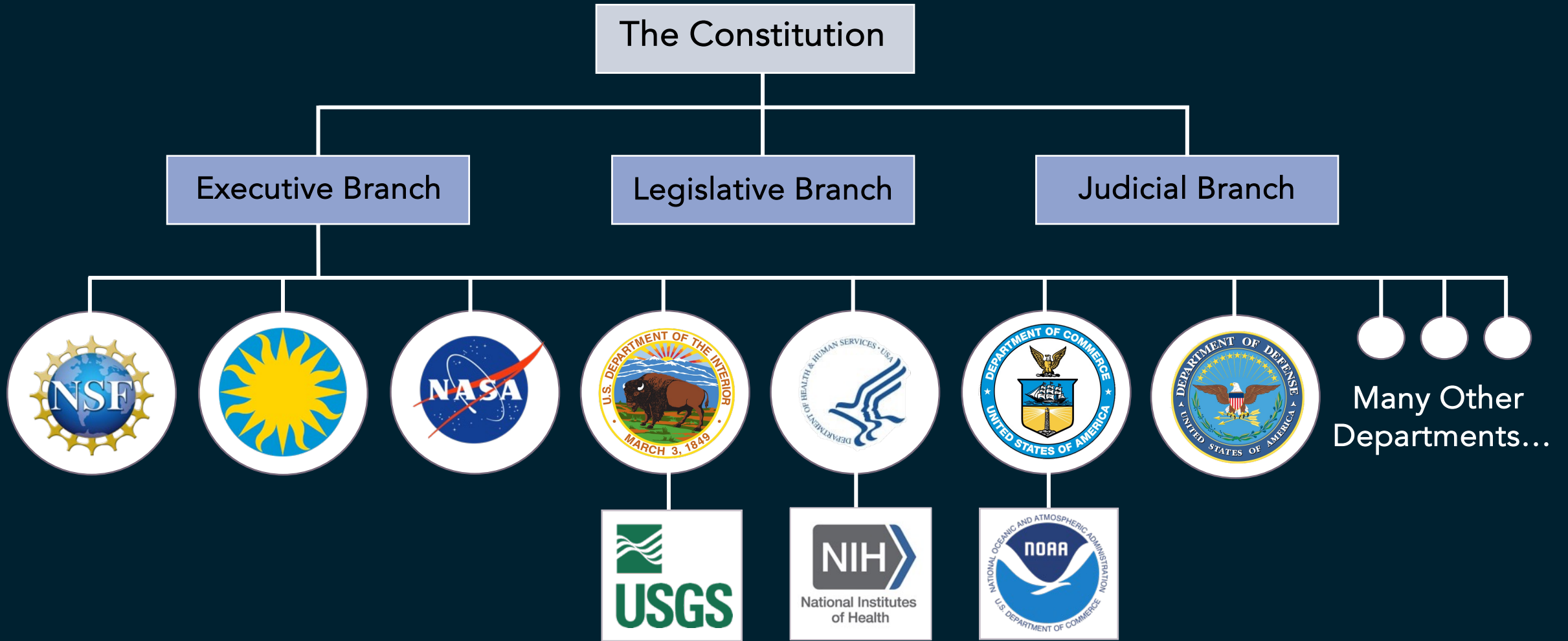


Jennifer Wade
Rachel Teasdale
Denise (Uebonda) McGee



The Government of the United States

(way oversimplified)





NSF Structure

The Director, Office of Budget, Office of International Science & Engineering, Finance, & Award Management, etc.

Directorate for
Biological Sciences (BIO)

Directorate for
**Geosciences
(GEO)**

Directorate for
Engineering (ENG)

Directorate for
**Social, Behavioral &
Economic Sciences (SBE)**

Directorate for
**Computer & Information
Science & Engineering
(CISE)**

Directorate for
**Education & Human
Resources (EHR)**

Directorate for
**Mathematical & Physical
Sciences (MPS)**

Directorate for
**Technology, Innovation
and Partnerships (TIP)**

Our mission:

To fund the development of knowledge and technological innovations to:

- Understand and adapt to the changes in our earth, ocean, and atmosphere,
- Accelerate the societal benefits of our investments, and
- Train a diverse and inclusive geosciences workforce.



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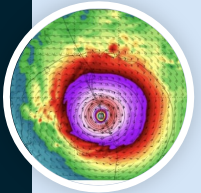


Earth Sciences (EAR)



Ocean Sciences (OCE)

Directorate for
Technology, Innovation
and Partnerships (TIP)



Atmospheric and
Geospace Sciences (AGS)



Polar Programs (OPP)



Research, Innovation,
Synergies, and Education
(RISE)



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Earth Sciences (EAR)

Directorate for Technology, Innovation and Partnerships (TIP)

Disciplinary Programs (DP)

Geobiology and Low Temperature Geochemistry (GG)

Petrology and Geochemistry (CH)

Geomorphology and Land-use Dynamics (GLD)

Geophysics (PH)

Hydrologic Sciences (HS)

Tectonics (TE)

Sedimentary Geology and Paleobiology (SGP)

Integrated Activities (IA)

Education and Human Resources (EHR)

Cooperative Studies of the Earth's Deep Interior (CSEDI)

Postdoctoral Fellowships

Critical Zone Collaborative Network (CZN)

Instrumentation and Facilities (IF)

Paleo Perspectives on Present and Projected Climate (P4CLIMATE)

Geoinformatics (GI)

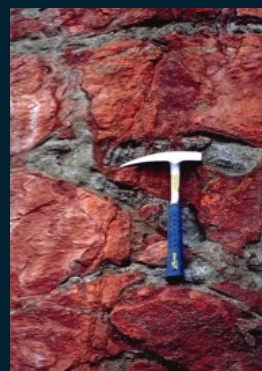
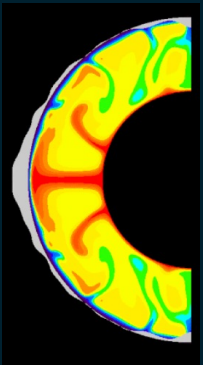
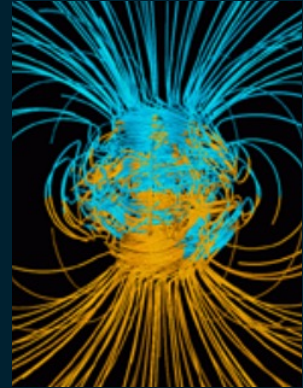
Frontier Research in Earth Sciences (FRES)

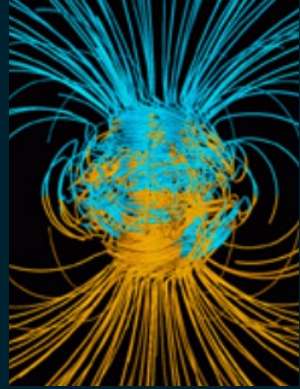
Petrology & Geochemistry

Basic research on rocks and processes from the formation of planet Earth through its evolution to today...

...igneous & metamorphic petrology and geochemistry, mineral physics, economic geology, and volcanology...

...the development of analytical tools, theoretical and computational models, and experimental techniques.





Petrology & Geochemistry

We work a lot with others!



Geophysics

Tectonics

Hydrologic Sciences

Geobiology & Low-Temperature Geochemistry

CSEDI (Cooperative Studies of the Earth's Deep Interior)

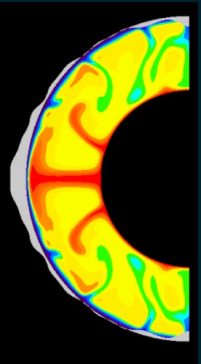
Geoinformatics

Marine Geology & Geophysics

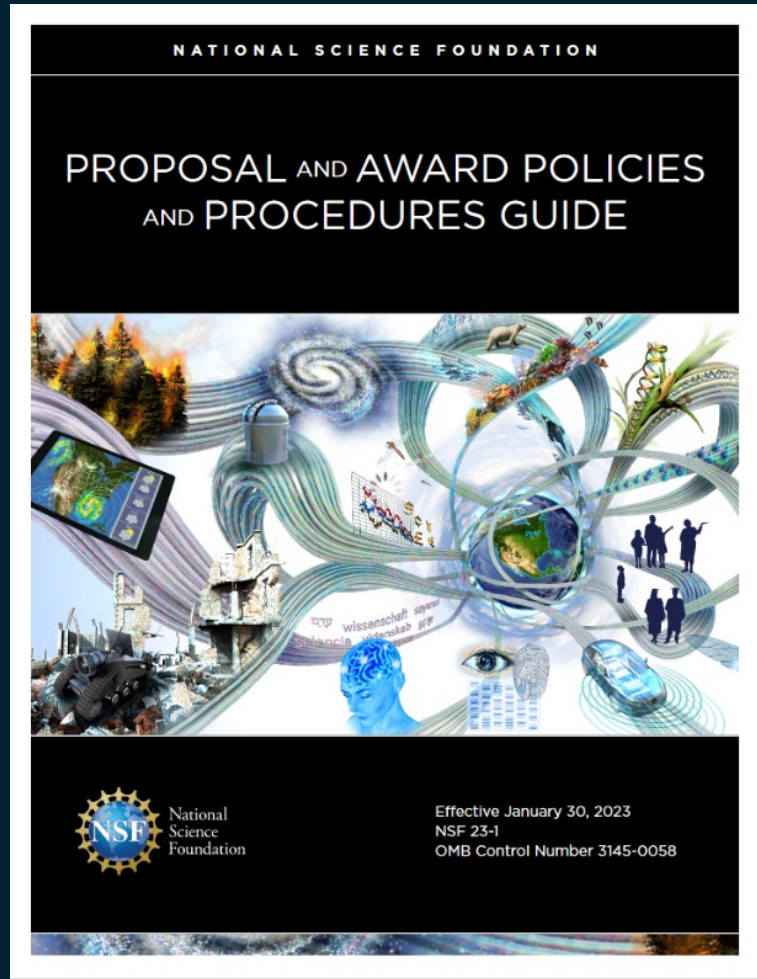
Antarctic Earth Sciences

Engineering

Critical Aspects of Sustainability



Essential Guiding NSF Document - PAPPG



NSF 23-1

- Provides guidance for preparation and submission of proposals to NSF
 - Who can submit proposals?
 - What is allowed in the budget?
 - Format + required documents
- Describes process – and criteria – by which proposals will be reviewed
- Outlines reasons why a proposal may be returned without review


As of May 20, follow PAPPG 24: <https://new.nsf.gov/policies/pappg/24-1>

Our Solicitation

Updated last year: 22-560

An official website of the United States government [Here's how you know](#) ▾

Welcome to the new NSF.gov experience. [Take a brief survey](#) to share your feedback.


 National Science Foundation

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Petrology and Geochemistry (CH)

[View guidelines](#)
22-560

 [View image credit](#)

[← Search for more funding opportunities](#) [Print](#)

Important information for proposers
All proposals must be submitted in accordance with the requirements specified in this funding opportunity and in the NSF [Proposal & Award Policies & Procedures Guide \(PAPPG\)](#) that is in effect...

Synopsis

The Petrology and Geochemistry Program supports basic research on the formation of planet Earth, including its accretion, early differentiation, and subsequent petrologic and geochemical modification via igneous and metamorphic processes. Proposals in this program generally address the petrology and high-temperature geochemistry of igneous and metamorphic rocks and minerals (including mantle samples), mineral physics, economic geology, and volcanology. Proposals that are focused on the development of analytical tools, theoretical and computational models, and experimental techniques for applications by the igneous and metamorphic petrology, and high temperature geochemistry and geochronology communities are also invited. The program supports a wide range of Broader Impacts activities, including (but not limited to) infrastructure enhancement, partnerships with industry, and evidence-based practices that recruit and specifically retain...

Upcoming due dates

Full proposal accepted anytime

Program guidelines

Award information
annually, pending availability of funds

Estimated number of awards
40 to 60 - annually

Proposals may only be submitted by

- Deadline / Target Date
- Synopsis (do you belong?)
- Program Directors (who to ask questions)
- Eligibility (are you/your institution allowed in this program?)
- How much money do they have, how many awards do they expect?

Our Solicitation

Updated last year: 22-560

Petrology and Geochemistry (CH)

PROGRAM SOLICITATION

NSF 22-560

REPLACES DOCUMENT(S):

NSF 20-523



National Science Foundation
Directorate for Geosciences
Division of Earth Sciences

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

Proposals Accepted Anytime

IMPORTANT INFORMATION AND REVISION NOTES

This solicitation clarifies data management requirements and reminds PIs that Broader Impacts activities should be specifically addressed in annual and final reports.

This solicitation clarifies requirements for proposals to work in foreign countries, or on Native/Tribal/Indigenous lands.

This solicitation allows for the inclusion of Student Mentoring Plans in the Supplementary Documents.

Important Information

Innovating and migrating proposal preparation and submission capabilities from FastLane to Research.gov is part of the ongoing NSF information technology modernization efforts, as described in [Important Notice No. 147](#). In support of these efforts, research proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov, and may not be prepared or submitted via FastLane.

Any proposal submitted in response to this solicitation should be submitted in accordance with the [NSF Proposal & Award Policies & Procedures Guide](#) (PAPPG).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Petrology and Geochemistry (CH)

Contact information again

PI limit (3 proposals per PI per year)

We allow up to \$50k in equipment requests

Awards made through this program

[Browse projects funded by this program](#)

Our Solicitation

Updated last year: 22-560

In addition to the NSF PAPPG, EAR has a separate Data Policy that covers Data Management Plans:

EAR's definition of "data" is expansive and includes:

full data sets, derived data products (e.g., model results, output, and workflows), software, and physical collections (samples)

The DMP should clearly describe what data will be collected, what analyses will be done, when data collection is considered "final," and how and when the project will provide open and timely access to data during and after the project

PIs are strongly encouraged to identify long-lived disciplinary repositories most appropriate for the data types to be collected.

<https://www.nsf.gov/geo/geo-data-policies/ear/index.jsp>

Our Solicitation

Updated last year: 22-560

Student Mentoring Plans are allowed in the Supplementary Documents but this is changing to a REQUIREMENT in the 2024 PAPPG!!

Field Projects must include “the protocol that will be undertaken to ensure the safety of the field party, especially students and others who are inexperienced in working under conditions that can be, at times, uncomfortable, unfamiliar, or threatening.”

Letters of Collaboration can be expanded to one page if re: capabilities, samples, or other details.



How are proposals reviewed? According to the NSF Merit Review Criteria



Intellectual Merit

the potential to **advance**
knowledge



Broader impacts

the potential to benefit society

Both review criteria must be addressed *explicitly* in
the Project Summary & the Project Description

Broader Impacts: Benefitting Society

These are examples, and you are not limited to these!

Teaching, training,
and learning
(undergrads + grad
students)

Broaden
participation of
underrepresented
groups

Build or enhance
partnerships
(local, international,
or with other
agencies)

Broad
dissemination and
public outreach

Enhance
infrastructure (labs,
equipment, + work
in developing
countries)

Local impacts
(policies @ federal,
state, local level)

Broader Impacts: Benefitting Society

Teaching, training,
and learning

(un

Broaden
participation of

Build or enhance
partnerships

nal,

It is better to do 1 or 2 well than to try covering them all

Not every PI or institution is well suited for the same BI

BI should be integrated and meaningful, not tacked on

di

public outreach

in developing
countries)

state, local level)

ral,



Career Trajectory Proposals

Graduate Research Fellowships Program (GRFP)

- 5-year fellowship; includes 3 years of financial support and an education allowance

Postdoctoral Fellowship Proposals (EAR)

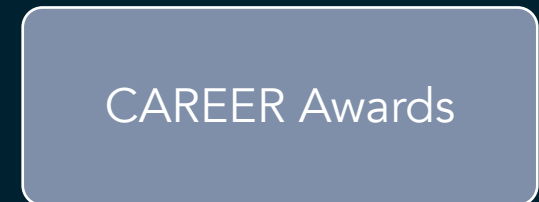
- 2 years, details vary by Division/Office

CAREER Proposals

- 5 years and \$500K +
- Integrated research and education by untenured ECRs

Mid-Career Advancement Proposals (MCA)

- Protected time + resources to gain new skills in mentored partnership
- Across 2 years: ≤ 6.5 mo salary + 1 mo partner salary + \$100k direct
- GEO + BIO: For Associate Profs (3+yr) & Full Prof @ PUI



disciplinatory program reviewed in



Other Relevant Opportunities

Geoscience Lessons for and from Other Worlds ([GLOW](#))

- Extraterrestrial investigations to understand Earth or vice versa

Critical Minerals Research ([GEO-CM](#))

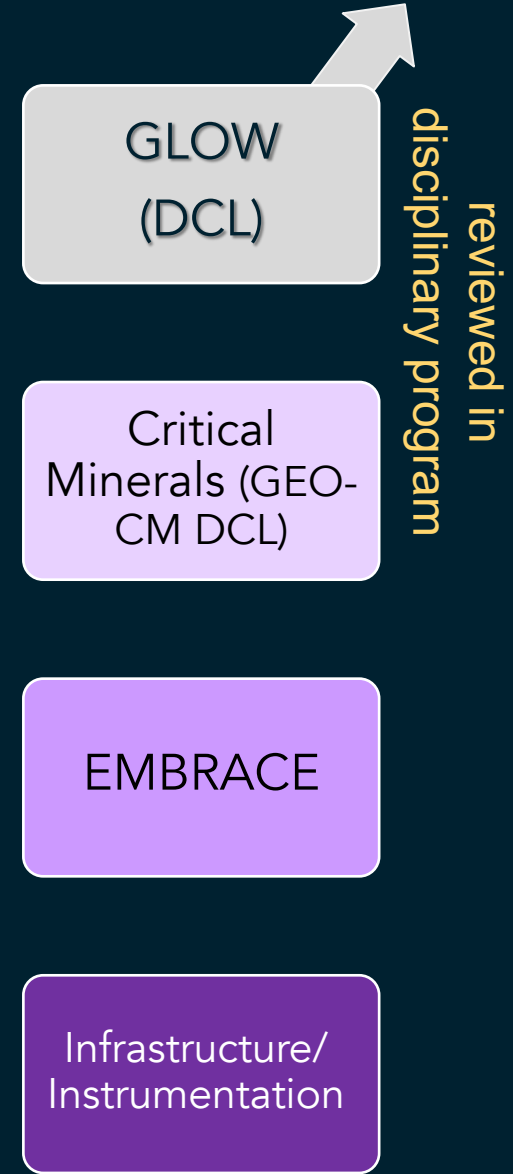
- Research on formation, characterization, development, and separation of critical materials and the impacts on the environment and society

GEO EMpowering BRoader Academic Capacity and Education ([GEO-EMBRACE](#))

- Research at non-R1 institutions; Two tracks, 2 + 4 years

Research Instrumentation & Infrastructure

- [EAR-Instrumentation & Facilities](#)
- NSF-MRI (Major Research Instrumentation)
- NSF-Midscale Research Infrastructure (MSRI-1 and MSRI-2)
- [Geoinformatics](#)





Other Relevant Opportunities



Award Supplements

- REU (Research Experiences for Undergraduates)
- INTERN <https://new.nsf.gov/funding/opportunities/non-academic-research-internships-graduate>
- Career Life Balance <https://www.nsf.gov/career-life-balance/>
- ROA

Mechanisms + Special Proposal Types

- RAPID – for rapid response
- EAGER – for ultra-high-risk research
- Conference – (these are workshops!)

Lead Agency Agreements

UK • Switzerland • Taiwan • Israel • Ireland • Germany • EU

<https://www.nsf.gov/geo/geo-leadagency-opp/>

Program Decision-Making & Portfolio Balance

Potential for
transformative
impact

Priority or
timeliness of the
area of study

Demographics
of the PI
population

Diversity of
institution
types

Geographic
diversity

PI career stage
(early, mid,
senior)

International
partnerships

Breadth of
topics
supported



*+ many other things depending
on the program goals*

Get involved & stay informed



Video to learn more about Navigating the
NSF System and GEO

- Subscribe to NSF email updates & Division/Office Newsletters
- Learn more: nsf.gov
nsf.gov/EAR
nsfpolicyoutreach.com
- Be a reviewer! Send us an email!

jwade@nsf.gov
rteasdal@nsf.gov

