

The background is a vibrant, futuristic cityscape. A prominent feature is a large, white, curved bridge spanning across a body of water. In the foreground, there are several circular, fenced-in areas containing fish, suggesting an aquaculture or marine research facility. The city includes modern buildings, green spaces, and various technological elements like drones and data displays. Two circular inset images are overlaid on the scene. The top-left inset shows a woman and children in a classroom setting, with a text box that reads: 'Class Focus: Antarctica and Emperor Penguins', 'English: penguin', 'Spanish: pingüino', 'Yaghan: kuka', 'Read: Dobby Penguins', 'Observe: Scientists in Antarctica', and 'Write: What would you have a pet?'. The top-right inset shows a woman interacting with a futuristic digital interface displaying various charts and data. The bottom-right inset shows a man and a child in a field, with a small robot-like device and a data graph overlaid on the scene.

NSF Funding Opportunities for Science and Technology Studies Research

Wenda Bauchspies
Fred Kronz

STS Across the Commonwealth, 28-29 April 2022



The Government of the United States

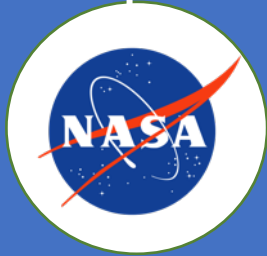
(the simple version)

The Constitution

Executive Branch

Legislative Branch

Judicial Branch



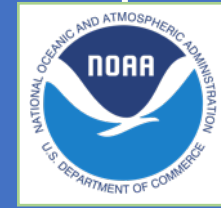
Department of the Interior



Department of Health & Human Services



Department of Commerce



Department of Defense



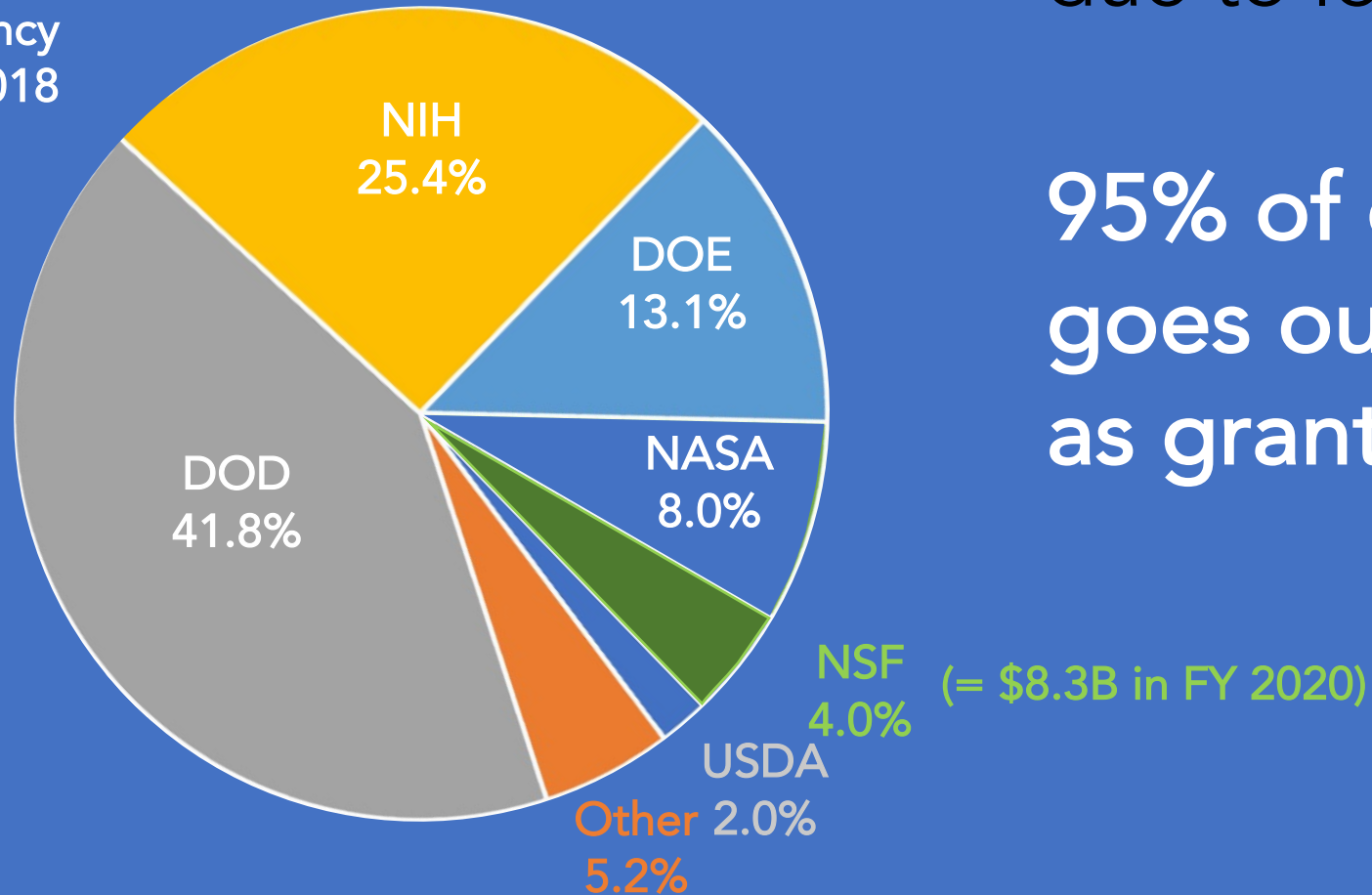
Many Other Departments...



NSF is a very small agency...

...with a **big impact**,
due to low overhead

Total R&D by Agency
FY 2018



95% of our money
goes out the door
as grants



NSF Structure

Eight Funding Directorates...

Geosciences
(GEO)

Biological
Sciences
(BIO)

Computer &
Information
Science &
Engineering
(CISE)

Engineering
(ENG)

Education &
Human
Resources
(EHR)

Mathematical
& Physical
Sciences
(MPS)

Social,
Behavioral &
Economic
Sciences
(SBE)



Social Sciences at NSF

**Directorate for Social,
Behavioral & Economic
Sciences**

**Social and Economic
Sciences**

**Behavioral and
Cognitive Sciences**

**National Center for
Science and Engineering
Statistics**



Behavioral and Cognitive Sciences (BCS)

Supports research to develop and advance scientific knowledge on:

- Human cognition
- Language
- Social behavior
- Culture
- Interactions between human societies and the physical environment



Social and Economic Sciences (SES): Core Programs

- Science and Technology Studies (STS)
- Ethical and Responsible Research (ER2)
- Science of Science: Discovery, Communication, and Impact (SoS:DCI)
- Sociology
- Accountable Institutions and Behavior (AIB)
- Security and Preparedness (SAP)
- Economics
- Law and Science (LS)
- Science of Organizations
- Decision, Risk, and Management Science (DRMS)
- Methodology, Measurement, and Statistics (MMS)

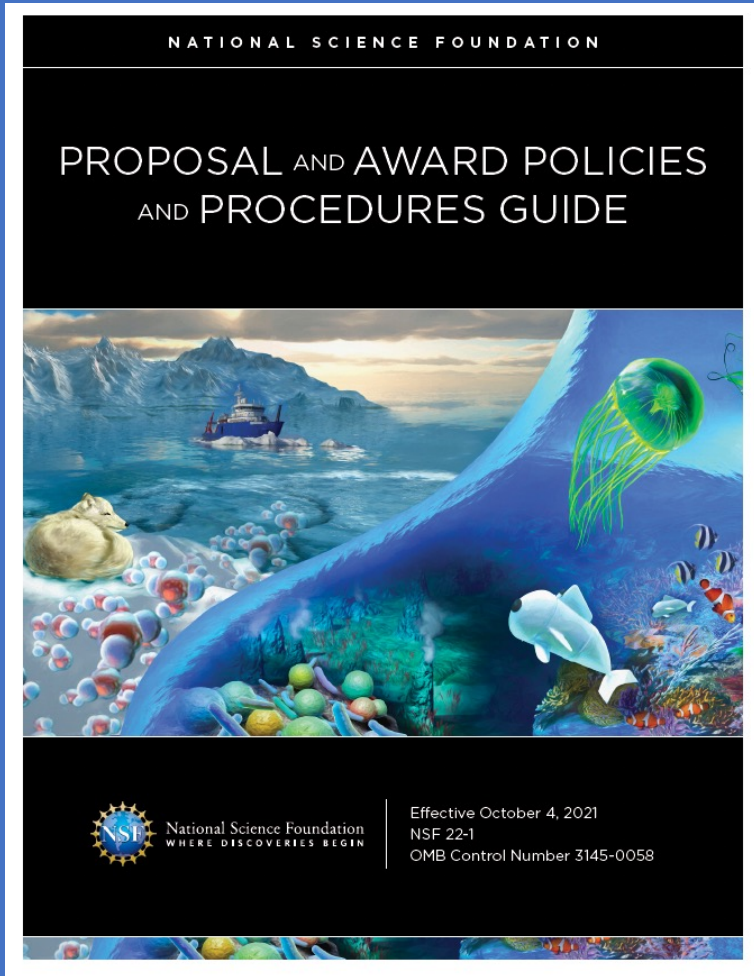


SBE Office of Multidisciplinary Activities (SMA)

- Research Experiences for Undergraduates (REU) Sites
- SBE Postdoctoral Research Fellowships (SPRF)
- Ethical and Responsible Research (ER2)



Essential Documents – PAPPG 2022



- 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

NSF 22-1



Essential Documents - Solicitation

Science and Technology Studies (STS)

PROGRAM SOLICITATION

NSF 19-610

REPLACES DOCUMENT(S):

NSF 15-506



National Science Foundation

Directorate for Social, Behavioral and Economic Sciences

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

February 03, 2020

February 2, Annually Thereafter

Standard and Collaborative Research, Scholars, Professional Development, Research Community Development, and Conference Proposals

August 03, 2020

August 3, Annually Thereafter

Standard and Collaborative Research, Scholars, Professional Development, Research Community Development, Conference and DDRIG Proposals

IMPORTANT INFORMATION AND REVISION NOTES

1. The program name has been changed from "Science, Technology, and Society" to "Science and Technology Studies" to best connect in an inclusive manner with the research communities that are served by the program.
2. Eligibility requirements for Scholars Awards have been changed; these grants are to be made to U.S. Institutions of Higher Education and to U.S. Non-profit, Non-academic Organizations. Unaffiliated scholars are no longer eligible for Scholars Awards.
3. Postdoctoral Fellowship proposals are no longer supported by the program. Postdoctoral Fellowship proposals should be submitted to the SBE Postdoctoral Research Fellowship Program, [NSF 18-584](#).
4. The caps set on Doctoral Dissertation Research Improvement Grants and on Conference Support have been increased.
5. The Program Description provides an updated list of examples of STS research areas, topics, and approaches; the list has been revised based on current characterizations of the field by a broad range of STS departments and programs. A list of the main subfields of STS is also provided in the Program Description, and it is similarly based.
6. The Program Description includes explicit reference to a broader range of grant types that are now supported by the program, NSF wide grant opportunities, and two new types of grants: Professional Development Grants, and Research Community Development Grants.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 19-1)*, which is effective for proposals submitted, or due, on or after February 25, 2019.

- Deadline / Target Date
- Synopsis (do you belong?)
- Program Directors (who to ask questions)
- Eligibility (are you/your institution allowed in this program?)
- Budget limitations
- Do you need a Pre-Proposal or Letter of Intent?
- How much money do they have, how many awards do they expect?



Finding NSF Program Solicitations

Programs discussed in this presentation

- Science and Technology Studies (STS)
- Ethical and Responsible Research (ER2)
- Science of Science (SoS)
- NSF Research Traineeship (NRT)
- Dynamics of Integrated Socio-Environmental Systems (DISES)
- Convergence Accelerator (C-Accel)

To find the program solicitation

- Use Google
- Insert: NSF <program acronym or program name>

Science and Technology Studies (STS)

STS Important Information

The Science and Technology Studies program evolved from the former Science, Technology, and Society Program. Please navigate to this [list of active awards](#) to see what was funded by Science, Technology, and Society.

CONTACTS

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PROGRAM GUIDELINES

Solicitation [19-610](#)

Important Information for Proposers

A revised version of the *NSF Proposal & Award Policies & Procedures Guide (PAPPG)* (NSF 20-1), is effective for proposals submitted, or due, on or after June 1, 2020. Please be advised that, depending on the specified due date, the guidelines contained in NSF 20-1 may apply to proposals submitted in response to this funding opportunity.

DUE DATES

Full Proposal Deadline Date

August 3, 2021

August 3, Annually Thereafter

Standard and Collaborative Research, Scholars, Professional Development, Research Community Development, Conference and DDRIG Proposals

February 2, 2022

February 2, Annually Thereafter

Standard and Collaborative Research, Scholars, Professional Development, Research Community Development, and Conference Proposals

SYNOPSIS

The Science and Technology Studies (STS) program supports research that uses historical, philosophical, and social scientific methods to investigate the intellectual, material, and social facets of the scientific, technological, engineering and mathematical (STEM) disciplines. It encompasses a broad spectrum of topics including interdisciplinary studies of ethics, equity, governance, and policy issues that are closely related to STEM disciplines.

The program's review process is approximately six months. It includes appraisal of proposals by ad hoc reviewers selected for their expertise and by an advisory panel that meets twice a year. The deadlines for the submission of proposals are February 2nd for proposals to be funded as early as July, and August 3rd for proposals to be funded in or after January. There is one exception: Doctoral Dissertation Improvement Grant proposals will have only one deadline per year, August 3rd.

The Program encourages potential investigators with questions about the program to contact one of the Cognizant Program Directors. Potential investigators who have concerns about whether their proposal fits the goals of the program are encouraged to send a one-page prospectus of their proposal idea to the Cognizant Program Directors. Guidelines for developing one-page prospectuses are provided below under Guidelines for Developing Effective STS Proposals.

[What Has Been Funded \(Recent Awards Made Through This Program, with Abstracts\)](#)

[Map of Recent Awards Made Through This Program](#)

Award Information

Anticipated Type of Award:

Standard Grant or Continuing Grant

Estimated Number of Awards: 40

Anticipated Funding Amount: \$6,200,000

Approximately \$6,200,000 will be made available in FY 2020 to support an estimated 40 awards.

Estimated program budget and number of awards are subject to the availability of funds.



Ethical and Responsible Research (ER2)

- Supports research on
 - Factors promoting ethical STEM practices
 - Techniques for cultivating cultures of ethical STEM
- Factors affecting ethical STEM practices include:
 - Honors codes
 - Ethics training programs
 - Professional ethics codes & laboratory cultures
 - Faculty mentoring activities



ER2 Explores the following RQs...

- What constitutes ethical STEM research and practice, and which cultural and institutional contexts promote ethical STEM research and practice and why?
- Why certain labs/universities have a 'culture of academic integrity' while others do not?
- What practices contribute to the establishment and maintenance of ethical STEM cultures and how can these practices be transferred, extended to, and integrated into other research and learning settings?



Primary Modes of Support for ER2 Funding

- Standard Research Grants
- Institutional Transformation Grants
- Conference and Workshop Awards
- Proposal Incubation Grants



Science of Science: Discovery, Communication, and Impact (SoS:DCI)

- Supports research on
 - How to increase the rate of socially beneficial discovery
 - How to improve science communication outcomes
 - How to expand the societal benefits of scientific activity
- Proposals should
 - Develop data, models, indicators, and associated analytical tools that constitute and enable transformative advances
 - Identify ethical challenges, mitigate potential risks to people and institutions
 - Provide credible metrics and rigorous assessments of the project's impact
 - Include robust data management plans with the goal to increase the usability, validity, and reliability of scientific materials.



Core Goals of SoS:DCI

- Of particular interest are
 - Proposals that have the highest potential to strengthen America's global leadership in science and increase national competitiveness across a broad range of domains.
 - Proposals that analyze strategies for strengthening and diversifying the scientific workforce, as well as ways to more effectively cultivate high-impact discovery across sectors.
 - Proposals that engage in convergent research and collaboration.



Primary Modes of Support for SoS Funding

- RAPIDs and EAGERs
- Research Advanced by Interdisciplinary Science and Engineering (RAISE)
- Grant Opportunities for Academic Liaison with Industry (GOALI)
- Conferences
- Doctoral Dissertation Research Improvement Grants (DDRIGs)



NSF Research Traineeship (NRT) Program

Key Goals of the Program:

- Catalyze and advance cutting-edge interdisciplinary or convergent research in high priority areas
- Increase the capacity of U.S. graduate programs to produce diverse cohorts of interdisciplinary STEM professionals with technical and transferable professional skills for a range of research and research-related careers within and outside academia
- Develop innovative approaches and knowledge that will promote transformative improvements in graduate education



NRT Modes of Support

- Anticipated Type of Award: Standard Grant
- NRT Track 1 Awards (14-16 awards each year) are expected to be up to five (5) years in duration with a total budget up to \$3,000,000.
- NRT Track 2 Awards (4-6 awards each year) are expected to be up to five (5) years in duration with a total budget up to \$2,000,000.
- Estimated Number of Awards: 18 to 20
- Anticipated Funding Amount: \$55,000,000



Dynamics of Integrated Socio-Environmental Systems (DISES) Program

DISES proposals...

- must clearly identify a Socio-Environmental (SE) system, synthesis of multiple SE systems, or problems that are amenable to investigation from both environmental-science and social-science perspectives.
- should examine human societies and environmental characteristics as system components comprised of many individuals or processes at local, regional or global scales.
- should address research questions that will advance theory in the science of SE systems or related interdisciplinary fields such as Coupled Human and Natural Systems as well as make contributions in specific disciplines.



DISES Modes of Support

- DISES supports research projects and Research Coordination Networks (RCN).
- DISES research project awards will be two to five years in duration with a budget up to \$1,600,000.
- DISES-RCN awards will be four or five years in duration with a budget up to \$500,000.
- Anticipated Funding Amount: \$15,000,000 to \$18,000,000
- The amount of funding is approximate, pending availability of funds.



Other Opportunities: Dear Colleague Letters

- NSF 21-099 Dear Colleague Letter: Opportunities for Collaboration between CISE and SBE Researchers
- NSF 21-059 Dear Colleague Letter: A Broader Impacts Framework for Proposals Submitted to NSF's Social, Behavioral, and Economic Sciences Directorate
- NSF 21-019 Dear Colleague Letter: Strengthening American Infrastructure (SAI)
- NSF 20-048 Dear Colleague Letter: Build and Broaden: Enabling New Social, Behavioral and Economic Science Collaborations with Minority-Serving Institutions



TIP: Directorate for Technology, Innovation and Partnerships

TIP Programs

- America's Seed Fund powered by NSF (SBIR/STTR)
- *Convergence Accelerator*
- Innovation Corps (I-Corps™)
- Partnerships for Innovation (PFI)
- Pathways to Enable Open-Source Ecosystems (POSE)



NSF Convergence Accelerator

Accelerating Solutions Toward Societal Impact

GOALS:

- Disrupt the usual way of NSF business through a new innovation model
- Expand and diversifies multidisciplinary teams and partnerships to include academia, industry, nonprofits, government, and other sectors
- Deliver solutions that have a national societal impact



NSF Convergence Accelerator

Characteristics

- Use-inspired research
- Clear goals, milestones, high-impact deliverables
- Leverages multidisciplinary teams
- Larger, national societal scale
- Requires diverse partnerships – industry, nonprofits, academia
- Acceleration at speed and scale

Proactively & Intentionally Characteristics Managed

- Teams and Cohorts—“Tracks”
- Cooperation and Competition
- Intensive education and mentorship—human-centered design thinking, team science, and customer discovery
- Mission-driven evaluation



NSF Convergence Accelerator

2022 COHORT TRACK TOPICS

- TRACK H: Enhancing Opportunities for Persons with Disabilities
- TRACK I: Sustainable Materials for Global Challenges
- TRACK J: Food and Nutrition Security

NSF Solicitation, NSF-22-583: bit.ly/CA_Solicitation_NSF-22-583



Merit Review Criteria

- **Intellectual Merit (IM):**
The potential to advance knowledge
- **Broader Impacts (BI):**
The potential to benefit society and contribute to the achievement of specific, desired societal outcomes





5 Review Elements

IM

BI

1. Will the work advance knowledge, and benefit society?
2. Is the work creative? even potentially transformative?
3. Does the work plan make sense? Will they know if they're successful?
4. Is the team qualified to do what they propose?
5. Are there adequate resources available to PI to carry out the activities?



Broader Impacts: Benefitting Society

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

Broaden
participation of
underrepresented
groups

Build or enhance
partnerships
(internationally, or
with other agencies)

Broad dissemination
to enhance scientific
+ technological
understanding

Enhance
infrastructure
(labs, equipment,
etc.)

Local impacts
(policies @ state +
local level)



PHASE I

PROPOSAL
PREPARATION
AND SUBMISSION
90 DAYS

1

OPPORTUNITY
ANNOUNCED

2

PROPOSAL
SUBMITTED

3

PROPOSAL
RECEIVED

PHASE II

PROPOSAL
REVIEW AND
PROCESSING
6 MONTHS

4

REVIEWERS
SELECTED

5

PEER
REVIEW

6

PROGRAM
OFFICER
RECOMMENDATION

7

DIVISION
DIRECTOR
REVIEW

PHASE III

AWARD
PROCESSING
30 DAYS

8

BUSINESS
REVIEW

9

AWARD
FINALIZED



Why it is useful to submit, even if declined

- Revision and resubmission is strongly encouraged
- Discover other funding sources
- Forces thinking
- Builds relationships
- Receive reviews from experts



Additional Questions?

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Thank you!