

NSF Basics and Some Funding Opportunities

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Methodology, Measurement, and Statistics
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National Science Foundation (NSF)

- Established by Congress in 1950 as an independent federal agency to promote American science and engineering (S&E).
- The only federal agency that funds basic non-biomedical research and education across all fields of S&E and at all levels of education.
- Seeks high-risk, potentially transformative research projects that will generate path-breaking discoveries and new technologies.
- Funds advanced instrumentation and facilities.
- Supports Arctic and Antarctic research, science operations.



NSF Organizational Structure



Office of Equity and Civil Rights (OECR)

Office of the General Counsel (OGC)

Office of Integrative Activities (OIA)

Office of International Science and Engineering (OISE)

Office of Legislative and Public Affairs (OLPA)

Office of the Director (OD)

Director

Deputy Director

Chief Operating Officer

Chief of Research Facilities

Chief Information Officer

Chief of Research Security, Strategy and Policy

NSB National Science Board

Chair, Vice Chair, NSB Executive Officer

Office of the Inspector General (OIG)

Directorate for Biological Sciences (BIO)

Directorate for Computer and Information Science and Engineering (CISE)

Directorate for STEM Education (EDU)

Directorate for Engineering (ENG)

Directorate for Geosciences (GEO)

Directorate for Mathematical and Physical Sciences (MPS)

Directorate for Social, Behavioral and Economic Sciences (SBE)

Directorate for Technology, Innovation and Partnerships (TIP)

Office of Budget, Finance and Award Management (BFA)

Office of Information Resource Management (OIRM) ³

NSF Funds Basic Scientific Research

Basic scientific research is grounded in a broader theoretical framework.

It focuses on one or a few research questions grounded in that broader framework.

It uses scientifically sound approaches to assess the viability of answers to those questions.

Its focused results contribute to enhancement of broader theoretical knowledge.



Basic Versus Applied Research

- It's not "either/or"
- Basic research results often have great direct and indirect utility and applicability
- But at its core, basic research is first and foremost about broader theoretical development, not the focused application of specific research results
- Analysis and synthesis are favored over prescription



What NSF Supports



New Directorate: Technology, Innovation and Partnerships (TIP)

- TIP harnesses the nation's vast and diverse talent pool to advance critical and emerging technologies, address pressing societal and economic challenges, and accelerate the translation of research results from lab to market and society. TIP improves U.S. competitiveness, growing the U.S. economy and training a diverse workforce for future, high-wage jobs.
- TIP will work across the research areas identified on the prior slide. TIP will integrate with NSF's existing directorates and will foster partnerships - with government, industry, nonprofits, civil society and communities of practice - to leverage, energize and rapidly bring to society use-inspired research and innovation.



Social, Behavioral, and Economic Sciences



Kellina Craig-Henderson
Assistant Director

Vipin Arora
Acting Deputy Assistant Director



Marc Sebrechts
Behavioral and Cognitive Sciences Division Director

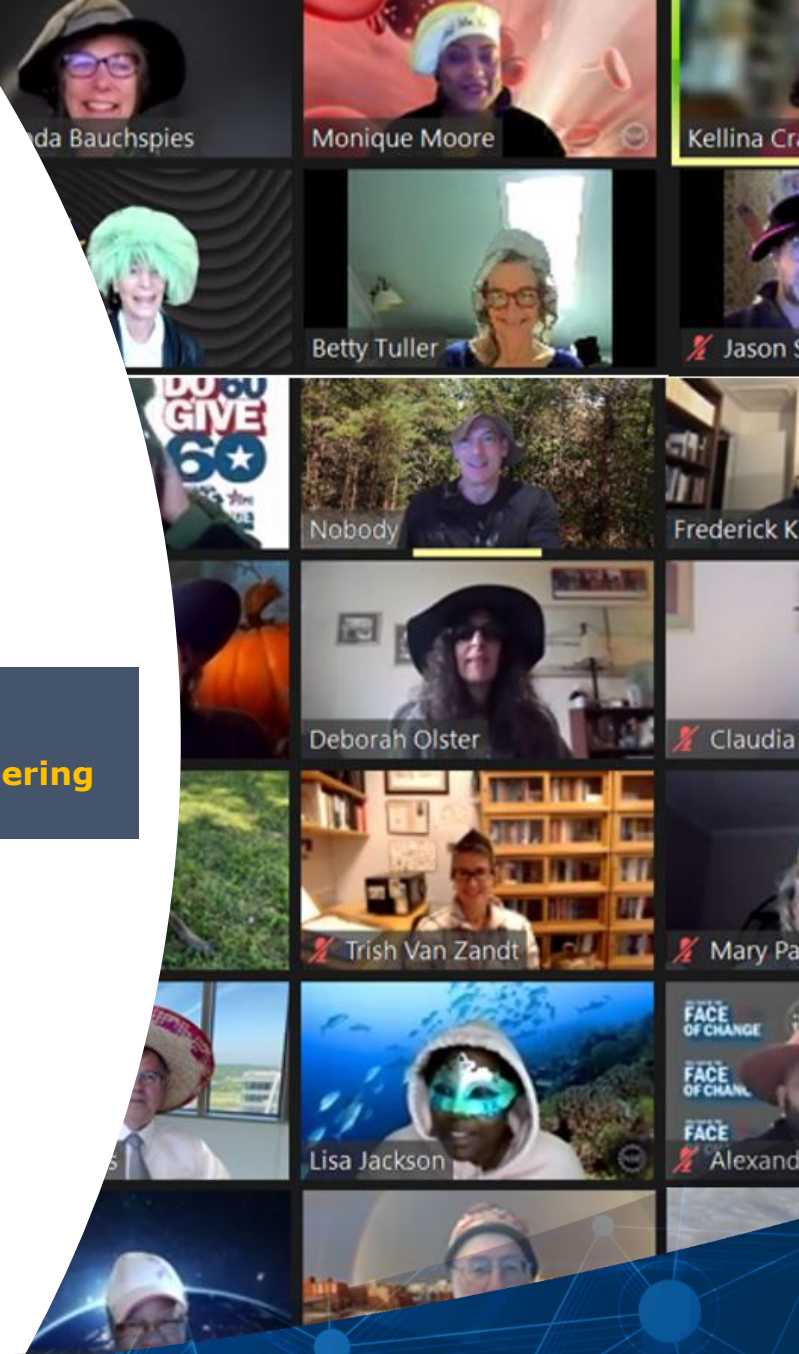


Rayvon Fouché
Social and Economic Sciences Division Director



Emilda Rivers
National Center for Science and Engineering Statistics Director

Office of Multidisciplinary Activities



SBE Divisions/Programs

Behavioral and Cognitive Sciences

- Archaeology
- Biological Anthropology
- Cultural Anthropology
- Human Networks and Data Science
- Social Psychology
- Cognitive Neuroscience
- Developmental Sciences
- Science of Learning and Augmented Intelligence
- Linguistics & Dynamic Language Infrastructure
- Perception, Action and Cognition

Social and Economic Sciences

- Economics
- Accountable Institutions and Behavior
- Security and Preparedness
- Sociology
- Decision, Risk and Management Sciences
- Law and Sciences
- **Methodology, Measurement and Statistics**
- Science of Organizations Studies
- Secure & Trustworthy Cyberspace

Natl. Center for Science and Engineering Statistics

- Measuring
 - The Nation's Investment in R&D
 - The education and workforce characteristics of scientists and engineers
- Developing indicators of the Nation's competitiveness and innovation capacity
- Supporting research on the science and technology enterprise

Office of Multidisciplinary Activities

- Ethical and Responsible Research
- Research Experiences for Undergraduates Sites
- SBE Postdoctoral Research Fellowships
- Science of Science : Discovery, Communication & Impact



Methodology, Measurement, and Statistics (MMS) Program (NSF 19-575)

- The Methodology, Measurement, and Statistics (MMS) Program is an interdisciplinary program in the Directorate for Social, Behavioral, and Economic Sciences that supports the development of innovative analytical and statistical methods and models for those sciences.
- MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences.
- Funding Mechanisms:
 - Regular Research Proposals
 - Early Career Development (CAREER) proposals
 - Proposals for conferences, workshop, and community-development activities
 - Doctoral Dissertation Research Improvement (DDRI) proposals



Faculty Early Career Development (CAREER) Program (NSF 22-586)

- CAREER is an NSF-wide funding opportunity
- CAREER is NSF's most prestigious award in support of early-career faculty
- CAREER provides substantial support for "early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research."



CAREER Characteristics

- Minimum of \$400,000 for a 5-year duration for most programs; Minimum of \$500,000 for a 5-year duration for programs in BIO, ENG, and OPP
- NSF selects nominees for the Presidential Early Career Awards for Scientists and Engineers (PECASE) from among the most meritorious recent CAREER awardees.
- Integration of Research and Education
- Deadline: Fourth Wednesday in July
- Additional details; including recent webinar, on NSF CAREER site.



Doctoral Dissertation Research Improvement Proposals

- Supported by MMS in an effort to improve the quality of doctoral dissertation research.
- Funds are to be used for expenses associated with the conduct of the research that normally are not underwritten by the home institution.
- The advisor serves as principal investigator; the student serves as co-principal investigator.
- It is expected that the intellectual input to the proposed research be predominantly that of the student.
- The maximum for a DDRI award from MMS is \$18,000 (includes both direct and indirect costs).



Partnership with Federal Statistical Agencies

- As part of its larger portfolio, the MMS Program partners with a consortium of federal statistical agencies to support research proposals that further the development of new and innovative approaches to surveys and to the analysis of survey data.
- Potential topics for consideration include:
 - Measurement issues
 - Questionnaire design
 - Survey Design and Technology
 - Analytical Issues (e.g., uses of administrative data or paradata)
 - Small Area Estimation
 - Data Improvement (e.g., disclosure limitation methods)
 - Data Dissemination and Visualization



NSF Cyberinfrastructure for Sustained Scientific Innovation (CSSI) Program

- Supports the development and deployment of robust, reliable and sustainable data and software cyberinfrastructure
- Brings innovative capabilities towards sustained scientific innovation and discovery
- Provides a cross-directorate opportunity to advance common approaches to sustain and innovate research cyberinfrastructures.
- Follows accepted data management and software development practices
- Next deadline TBD



CSSI Award Classes

Project Class	Description
Elements	Small groups that will create and deploy robust capabilities for which there is a demonstrated need that will advance one or more significant areas of S&E. (Awards \leq \$600K, up to 3 years)
Framework Implementations	Larger, interdisciplinary teams organized around the development and application of common infrastructure aimed at solving common research problems faced by NSF researchers in one or more areas of S&E, resulting in a sustainable community framework serving a diverse community or communities. (Awards between \$600K - \$5 Million, between 3-5 years)
Transition to Sustainability	Groups who will execute a well-defined sustainability plan for existing CI with demonstrated impact in one or more areas of S&E supported by NSF. The sustainability plan should enable new avenues of support for the long-term sustained impact of the CI. (Awards \leq \$1 Million, up to 2 years)



Build and Broaden 3.0 (B2 3.0)

Goal: To enhance fundamental social, behavioral, and economic science (SBE) research at minority-serving institutions (MSIs)

- **Proposals may address any scientific area supported by SBE**
 - Infrastructure, capacity-building, training, but not primary objective
 - These activities should support, not supersede, the goals of the research
- **Principal investigator may be**
 - A full-time scientist, educator, or researcher who is affiliated with an accredited MSI
 - Or a full-time scientist, educator, or researcher **not** affiliated with an MSI, but who applies with co-investigators from an MSI
- **Lead Institution: May be any MSI or non-MS**
 - **But at least 50% of the overall project's direct costs** must go to the participating MSI
- **How do I know if my institution is an eligible MSI?**
 - For the purposes of this solicitation, MSIs include: **HBCU – HSI – TCU – ANNH – PBI – AANAPISI – NASNTI**
 - Ask administrators at your institution about your MSI status, or check the Department of Education website



B2 3.0 Contact Information

Build and Broaden contact information:

- sbe-buildandbroaden@nsf.gov
- Enrique Pumar (703) 292-5188, email: epumar@nsf.gov
- Lee D. Walker, telephone: (703) 292-7174, email: lwalker@nsf.gov
- Josie Welkom Miranda, telephone: (703) 292-7376, email: jwmirand@nsf.gov
- Siobhán M. Mattison, telephone: (703) 292-2967, email: smattiso@nsf.gov

For specific questions about your B2 3.0 proposal, you may include a **one-page project synopsis** with your inquiries to the program officers. Target date TBD for 2023.



Identify the Best Program(s) and/or Competition(s) for Your Research



- Focus on theory
 - In which communities is your theoretical framework drawn?
 - To which communities will it contribute?
- Consider where you will publish results.
 - Which journals will disseminate your findings?
 - Who are the researchers who read those journals?
- "Map" communities and readers onto NSF programs/competitions to identify the best fit.
- Many NSF programs co-review proposals.



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Strategies for Preparing Proposals to NSF

- Remember that NSF focuses on support for basic scientific research.
- Funding occurs through competitions with proposals subject to merit evaluation based on peer review.
- Allow plenty of time to learn about competitions, draft and revise a proposal, and submit proposal before deadlines.



General MMS Information

- **MMS Program Officer**

- Cheryl L. Eavey
- 703-292-7269; ceavey@nsf.gov
- https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5421&org=SES&from=home

- **Upcoming MMS Proposal Deadlines**

- August 25, 2022
- January 26, 2023

