

# Social, Behavioral and Economic Sciences at NSF

December 2023 NSF Virtual Grants Conference Naomi M. Hall-Byers, PhD, MPH

### NSF Supports Multiple STEM Fields





**Biological Sciences** 

Computer & Information Science & Engineering



**STEM Education** 



Engineering



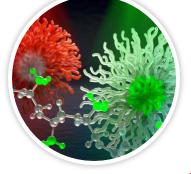
Geosciences (including Polar Programs)



**Integrative Activities** 



International Science and Engineering



Mathematical & Physical Sciences Social, Behavioral & Economic Sciences



Technology, Innovation & Partnerships



### Directorate for Social, Behavioral and Economic Sciences (SBE)

- Supports basic research on people and society.
- human behavior across the lifespan
- social organizations
  - How social, economic, political, cultural and environmental factors affect the lives and behavior of people
  - How people in turn shape those forces.

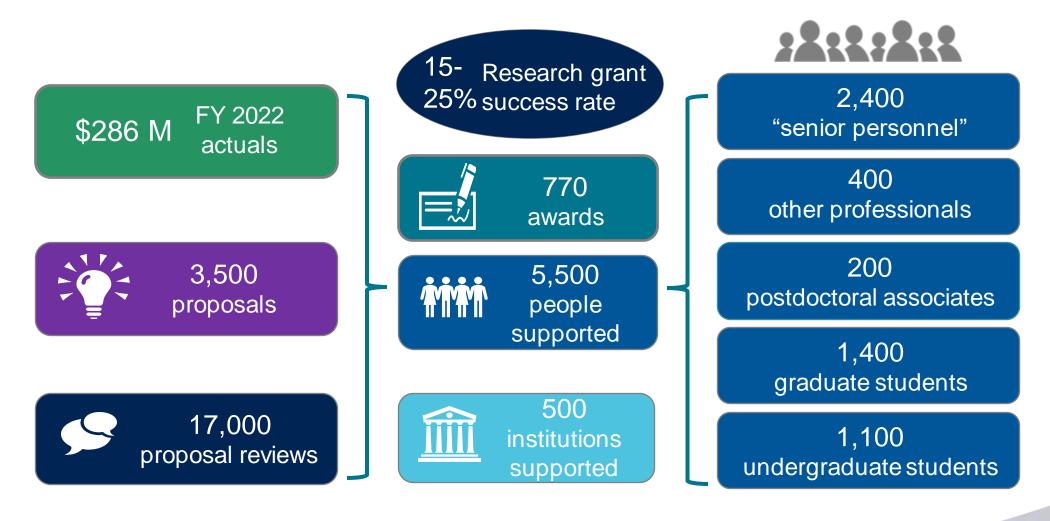


#### SBE- Structure of the Directorate

Office of the **Sylvia Butterfield Evan Heit** Assistant **Acting Deputy Acting Assistant** Director Director **Assistant Director Division of Division of** National Center **Behavioral and** Social and for Science and Cognitive **Economic** Engineering **Sciences Statistics** Sciences **SBE Office of** Multidisciplinary **Emilda Rivers Alam Tomkins** Joar: Sereno **Activities Division Director Division Director Acting Division** Director **Antoinette** Lee Walker **Christina Freyman WinklerPrins Deputy Division Acting Deputy Deputy Division** Director **Division Director** Director

**Program Directors & Admin Staff** 

### SBE by the Numbers: FY 2022



63% of federal funding for academic research in social and behavioral sciences

#### SBE Division of Behavioral and Cognitive Sciences (BCS)



**BCS** supports investigation within the psychological, linguistic, geographic, and anthropological sciences.

#### **BCS Programs**

Cognitive Neuroscience Developmental Sciences Linguistics and Dynamic Language Infrastructure\* Perception, Action and Cognition Science of Learning and Augmented Intelligence Social Psychology Human Environment and Geographical Sciences\* Human Networks and Data Science

> Archaeology\* Biological Anthropology\* Cultural Anthropology\*

\* Programs that support Doctoral Dissertation Research Improvement (DDRI) grants

# Human Networks and Data Science (NSF 23-568)

Leveraging data and network science, including geospatial data and infrastructure

- Two tracks both with budgetary maximums of \$1.2 million
  - <u>HNDS-Infrastructure</u> development of data resources, software, and analytic methods
  - <u>HNDS-Research</u> advance theory/modeling in a core SBE discipline by the application of data and network science methods.
    - "The HNDS-R program will co-review and co-fund projects with other SBE programs."

https://beta.nsf.gov/funding/opportunities/human-networks-and-data-science-hnds



# SBE Division of Social and Economic Sciences (SES)



**SES** invests in studies of how societies, organizations and economies function, including how decisions are made, how institutions function and how scientific and technological progress are pursued.

#### SES Programs

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

NSF

\* Programs that support Doctoral Dissertation Research Improvement (DDRI) grants

# Secure and Trustworthy Cyberspace (NSF 24-504)

Fragility and vulnerabilities of cyberspace

- Achieving a truly secure cyberspace requires addressing both challenging scientific and engineering problems involving many components of a system, and vulnerabilities that stem from human behaviors and choices.
- Social and behavioral sciences (SBE), communication and information sciences (CISE); engineering (ENG); education (EDU); mathematics and physical sciences (MPS).

https://new.nsf.gov/funding/opportunities/secure-trustworthy-cyberspace-satc

# SBE - Office of Multidisciplinary Activities (SMA)



**SMA** promotes undergraduate and postdoctoral training in the social, behavioral and economic sciences, including capacity-building at minority-serving institutions and the ethical conduct of scientific research.

#### **SMA** Programs

Build and Broaden Centers for Research and Innovation in Science, the Environment and Society (CRISES) Ethical and Responsible Research SBE Research Experiences for Undergraduates Sites SBE Postdoctoral Research Fellowships Science of Broadening Participation

## **Build and Broaden**

- The Build and Broaden (NSF 22-638) supports fundamental research in the SBE sciences by scholars at minority-serving institutions (MSIs).
- Proposals are invited from:
  - Single principal investigators (PIs) based at MSIs
  - Multiple co-investigators from one or more MSIs
  - Principal Investigators not affiliated with MSIs, but who collaborate with PIs, co-PIs, or senior personnel from MSIs. A primary goal of the proposed work *must* be how the project will enhance research partnerships or capacity-building with at least one MSI.



https://new.nsf.gov/funding/opportunities/build-broaden-enhancing-social-behavioral-economic

### SBE Postdoctoral Research Fellowships

- The program (NSF 23-500) supports supervised postdoctoral opportunities for recent doctoral graduates must have a host-sponsor but the funds are for the postdoctoral fellow
- The program has two tracks:

(I) Fundamental Research in the SBE Sciences (SPRF-FR) and

(II) Broadening Participation in the SBE Sciences (SPRF-BP)

https://new.nsf.gov/funding/opportunities/sbe-postdoctoral-research-fellowships-sprf

# SBE - National Center for Science and Engineering Statistics (NCSES)



**NCSES** collects and reports data on the science and engineering workforce, U.S. competitiveness in science and technology and the progress of education in these fields.



#### One of 13 principal federal statistical agencies

Overseen by the U.S. Chief Statistician within the White House Office of Management and Budget (OMB)

#### SBE – NCSES Surveys

FFRDC Research and Development Survey Survey of Federal Funds for Research and Development Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofits Survey of State Government Research and Development Higher Education Research and Development Survey Survey of Science and Engineering Research Facilities Annual Business Survey Business Enterprise Research and Development Survey Nonprofit Research Activities Survey Early Career Doctorates Survey National Survey of College Graduates National Training, Education, and Workforce Survey Survey of Doctorate Recipients Survey of Postdocs at Federally Funded Research and Development Centers Survey of Earned Doctorates Survey of Graduate Students and Post-doctorates in Science and Engineering



### SBE – Cross-Directorate Programs

- Centers for Research and Innovation in Science, the Environment and Society (CRISES)
- Strengthening American Infrastructure (SAI)
- Incorporating Human Behavior in Epidemiological Models
- Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)
- Dynamics of Integrated Socio-Environmental Systems (DISES)
- Accelerating Research Translation (ART)





#### Centers for Research and Innovation in Science, Environment, and Society (CRISES)

The CRISES Program seeks to:

- Build research capacity and infrastructure to address complex and compounding national and global crises whose solutions require a human-centered approach.
- Support interdisciplinary research to develop evidence-based solutions that address fundamental quality-of-life issues, such as those involving the environment, extreme weather and sustainability; workforce and the economy; equity and access to opportunities; and well-being.



https://new.nsf.gov/funding/opportunities/centers-research-innovation-science-environment

#### Dynamics of Integrated Socio-Economic Systems (DISES)

Studies the processes and interactions between human and environmental components of a system (NSF 23-609)

- Replaces the Dynamics of Coupled Natural and Human Systems program
- Budget maximum: \$1.6 million
- Commonly funded projects are composed of interdisciplinary teams that focus on complex interactions
- Also funds Research Coordination Networks (RCN)

https://beta.nsf.gov/funding/opportunities/dynamics-integrated-socio-environmental-systems-dises

# SBE – Cross-Agency Programs

- Collaborative Research in Computational Neuroscience (NSF 20-609). NSF-NIH-DOE
  - Opportunities for *parallel international funding* (Germany, France, Israel, Japan, Spain, and multilateral). <u>http://nsf.gov/crcns</u>
  - Many approaches and goals; related to biological processes; disease and normal function; theory, modeling, and analysis; implications for biological and engineered systems (SBE; CISE; BIO; MPS; ENG)
  - Research proposals and Data Sharing
- Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (NSF 21-530). NSF-NIH.
  - supports the development of high-risk, high-reward approaches to pressing questions in the biomedical and public health communities (SBE; CISE; ENG; MPS)

#### Kinds of Awards, aka "Mechanisms"

- Doctoral Dissertation Research Improvement Grants (DDRIGs)
- EAGER (EArly-concept Grants for Exploratory Research)
- RAPID
- Conference awards
- Research Coordination Networks (RCN)
- CAREER (Faculty Early Career Development Program)
- Mid-Career Advancement (MCA)
- Facilitating Research at Primarily Undergraduate Institutions

### Other Useful Terms:

- Dear Colleague Letter
- Deadline vs. Target date vs. Target window
- Program Solicitation/Program Announcement
- Program Description (webpage)

### How to Find Programs

- NSF Funding Search to look for programs and their past awards. https://new.nsf.gov/funding/opportunities
- NSF Award Search (Simple and Advanced) to see what program funded a particular researcher and/or to search award titles and abstracts by keywords. https://www.nsf.gov/awardsearch/
- Subscribe to NSF Announcements and Newsletters to get information on programs and their outreach efforts like webinars. https://service.govdelivery.com/accounts/USNSF/subscriber/new?qsp=823

#### Using NSF's Funding Search Tool : beta.nsf.gov/funding/opportunities

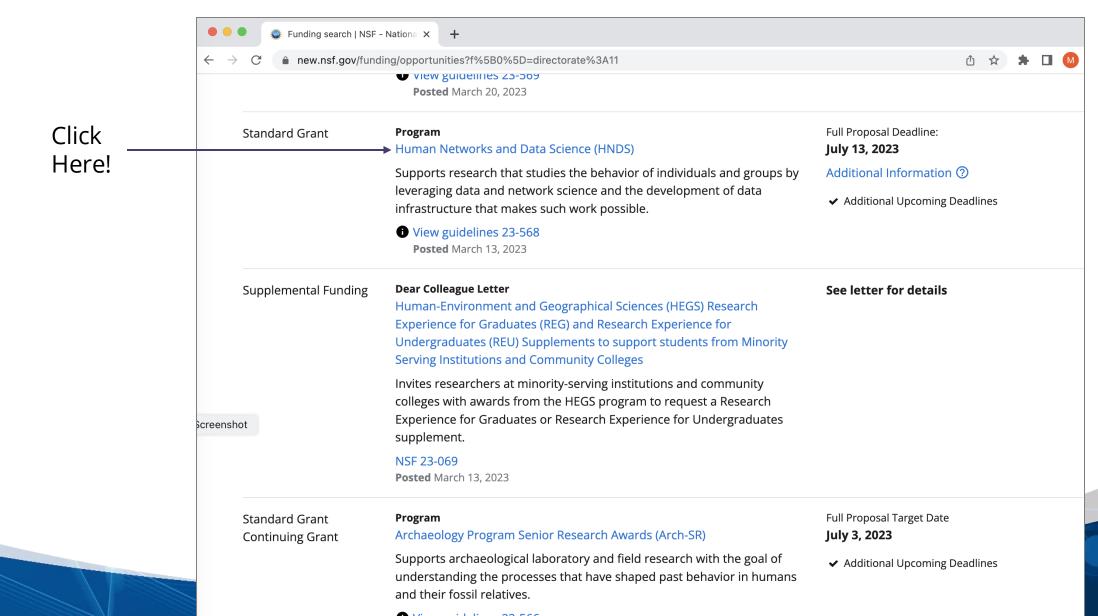
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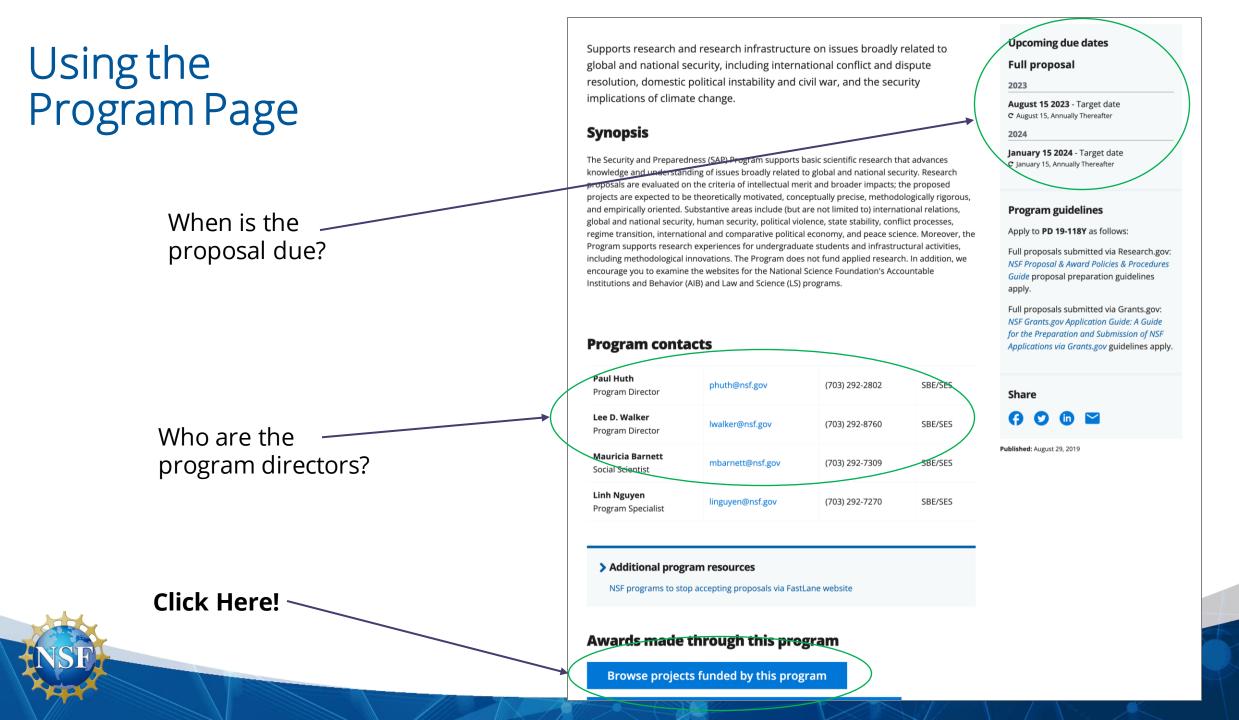
SBE

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#### The Results Include:





#### Advanced Award Search

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#### Award Search Results

Simple Search

Advanced Search

Popular Searches

Download Awards

#### What has been funded through a particular program?

the abstract

#### **Advanced Search Results** CSV | XML | Excel | A Text << 🗙 Email this Link | 🗐 Export All Results Export up to 3,000 Awards: Page 1 of 4 > > 2 Sort By: Relevance Results size: 30 per page v Table List Displaying 1 - 30 of 99 You Searched For: Element Code 1698 Clarifying the relationship between socioeconomic status and early psychological reasoning Active Awards true Award Number:1844416; Principal Investigator:Rose Scott; Co-Principal Investigator:; Organization:University of California - Merced;NSF Organization:BCS Start Date:06/01/2019; Award Amount:\$523,393.00; Relevance:48.0; **Refined by** Collaborative Research: Socialization Competencies and Youth Outcomes in Response to Racial Violence **Refine Search** Award Number: 2046053; Principal Investigator: Seanna Leath; Co-Principal Investigator:; Organization: University of Virginia Main Campus; NSF Organization: BCS Start Date:09/01/2021; Award Amount:\$252,977.00; Relevance:48.0; State Arizona(3) CAREER: Thriving in Context: Bridging Academic, Social, and Psychological Wellbeing among Black College Women to Increase STEM Retention California(18) (Broadening Participation and Persistence) Colorado(1) Award Number:2042090; Principal Investigator:Seanna Leath; Co-Principal Investigator:; Organization:University of Virginia Main Campus;NSF Organization:BCS Start Connecticut(4) Date:09/01/2021; Award Amount:\$258,718.00; Relevance:48.0; Screenshot nbia(3) **CAREER: Cultivating Curiosity to Promote Learning and Discovery** Award Number: 2047194; Principal Investigator: Kelsey Lucca; Co-Principal Investigator:; Organization: Arizona State University; NSF Organization: BCS Start **NSF** Organization Date:09/01/2021; Award Amount:\$511,769.00; Relevance:48.0; Direct For Social, Behav & Economic Scie(99) Peer Treatment across the Transition to Kindergarten: A test of Biological Sensitivity to Context Theory Award Amount Award Number:1939393; Principal Investigator: Jamie Ostrov; Co-Principal Investigator: Dianna Murray-Close; Organization: SUNY at Buffalo; NSF Organization: BCS Start Click on a title to get Less than or equal \$50,000(2) Date:09/15/2020; Award Amount:\$426,713.00; Relevance:48.0; Between \$50,001 - \$100,000(2) Between \$100,001 - \$500,000(54) Precursors to perspective taking: Examining monolingual and bilingual infants' attention to social cues Between \$500,001 - \$1,000,000(40) Award Number:1941434; Principal Investigator:Rachel Barr; Co-Principal Investigator:; Organization:Georgetown University;NSF Organization:BCS Start Date:09/15/2020; More than \$1,000,000(1) Award Amount: \$400,000.00; Relevance: 48.0; Award Instrument CAREER: Functional Brain Networks Mediating Positivity Bias in Healthy Aging Grant(75) Award Number:1752848; Principal Investigator: Maital Neta; Co-Principal Investigator:; Organization: University of Nebraska-Lincoln; NSF Organization: BCS Start Continuing Gra Date:05/15/2018; Award Amount:\$766,508.00; Relevance:48.0; Promoting Intergroup Friendships and Reducing Prejudice in Childhood Award Number:1728918; Principal Investigator: Melanie Killen; Co-Principal Investigator: Laura Stapleton; Organization: University of Maryland, College Park; NSF Organization: BCS Start Date: 09/01/2017; Award Amount: \$617,725.00; Relevance: 48.0;

Send Comments

Award Search Help

Abstract # 1844416 Clarifying the relationship between socioeconomic status and early psychological reasoning

NSF Org:	<u>BCS</u> Division Of Behavioral and Cognitive Sci	
Recipient:	UNIVERSITY OF CALIFORNIA, MERCED FOUNDATION	
Initial Amendment Date:	February 5, 2019	Note:
Latest Amendment Date:	February 5, 2019	• Topic area
Award Number:	1844416	
Award Instrument:	Standard Grant	
Program Manager:	Pamela Davis-Kean pdaviske@nsf.gov (703)292-2243 BCS Division Of Behavioral and Cognitive Sci SBE Direct For Social, Behav & Economic Scie	<ul><li> Program Directo</li><li> Duration</li></ul>
Start Date:	June 1, 2019	
End Date:	May 31, 2024 (Estimated)	
Total Intended Award Amount:	\$523,393.00	Awarded
Total Awarded Amount to Date:	\$523,393.00	
Funds Obligated to Date:	FY 2019 = \$523,393.00	amount
History of Investigator:	Rose Scott (Principal Investigator) rscott@ucmerced.edu	
Recipient Sponsored Research Office:	University of California - Merced 5200 N LAKE RD MERCED CA US 95343-5001 (209)201-2039	
Sponsor Congressional District:	13	
Primary Place of Performance:	University of California - Merced 5200 North Lake Road Merced CA US 95343-5001	
Primary Place of Performance Congressional District:	13	Co-funded?
Unique Entity Identifier (UEI):	FFM7VPAG8P92	
Parent UEI:		
NSF Program(s):	DS -Developmental Sciences	
Primary Program Source:	040100 NSF RESEARCH & RELATED ACTIVIT	

#### **Co-Review?**

- Submit one proposal and *request* review by multiple programs (Note: some programs do not co-review)
- Choose programs on the Cover Page (Units of Interest in research.gov)
- Program Directors can identify candidates for co-review
- Possible outcomes:
  - Both programs fund
  - Neither program funds
  - One program funds
- Reviews from multiple perspectives lead to better science.



#### Next Steps: Tips for Contact

After you have narrowed down to programs that match your area of research and you have read the program page (and solicitation, if applicable):

- Reach out to the Program Director by EMAILING a 1- or 2-page summary of your planned research project (IM and BI). Get feedback about project fit with program goals and ask any specific questions you have.
- Email ALL relevant programs and program directors in a SINGLE email. This is common for correspondence with NSF programs.
- Follow up if you haven't heard back in a week or two.
- Programs may offer Zoom appointments, office hours, or webinars as well.

Overlook key aspects of the program announcement and requirements.

Rely on advice from people who work only with other Directorates or from historical knowledge

Lack specificity about methods and/or data analysis plan.

Common Pitfalls in Proposals

Unclear how hypotheses and potential results relate to relevant theory.

Disconnect between framing/motivation and proposed activity.

Failure to consider alternative results/hypotheses

Failure to establish feasibility.

Not tailoring your proposal to the appropriate audience (disciplinary vs. multidisciplinary panel).

Broader Impacts? Why should the taxpayer care?

#### NSF Merit Review Criteria

#### NSF 21-059

#### Dear Colleague Letter: A Broader Impacts Framework for Proposals Submitted to NSF's Social, Behavioral, and Economic Sciences Directorate

March 18, 2021

Dear Colleagues:

The National Science Foundation (NSF) supports fundamental research in the social, behavioral, and economic (SBE) sciences. This research empowers our Nation to address great challenges and seize transformative opportunities. Through scientific advances and subsequent applications of these advances, SBE-supported research strengthens security and preparedness, creates jobs, spurs innovation, and improves quality of life for people across the country and around the world.

https://www.nsf.gov/pubs/2021/nsf21059/nsf21059.jsp

### Thank You! Questions?

- It may be helpful if you start by telling me who you are and what your role is:
  - Political science faculty member at xxxxx.
  - Ph.D. student in Business Information Systems at xxxx.
  - I work in the Economics Department at zzzz and I help the faculty with grants.
  - I'm in the sponsored research office at yyyy.
  - I'm an Associate Provost for Research.
- Email address for follow-up correspondence: nhallbye@nsf.gov

