

# National Science Foundation

**Judy McShannon**

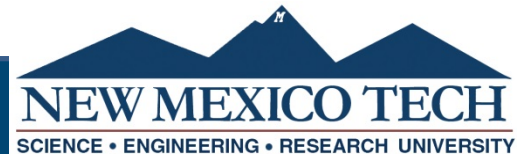
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Research Office

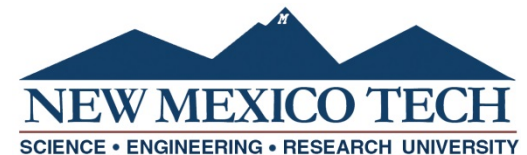


# Finding Funding - NSF Directorates

- Biology (BIO)- <http://www.nsf.gov/dir/index.jsp?org=BIO>
- Computer & Information Sciences and Engineering (CISE)  
<http://www.nsf.gov/dir/index.jsp?org=CISE>
- Education and Human Resources (EHR)  
<http://www.nsf.gov/dir/index.jsp?org=EHR>
- Engineering (ENG) - <http://www.nsf.gov/dir/index.jsp?org=ENG>
- Geosciences (GEO) - <http://www.nsf.gov/dir/index.jsp?org=GEO>
- Mathematical & Physical Sciences (MPS)  
<http://www.nsf.gov/dir/index.jsp?org=MPS>
- Social, Behavioral & Economic Sciences (SBE)  
<http://www.nsf.gov/dir/index.jsp?org=SBE>
- Office of International Science and Engineering  
<http://www.nsf.gov/div/index.jsp?div=OISE>
- Integrative Activities (OIA) - <https://www.nsf.gov/dir/index.jsp?org=OIA>

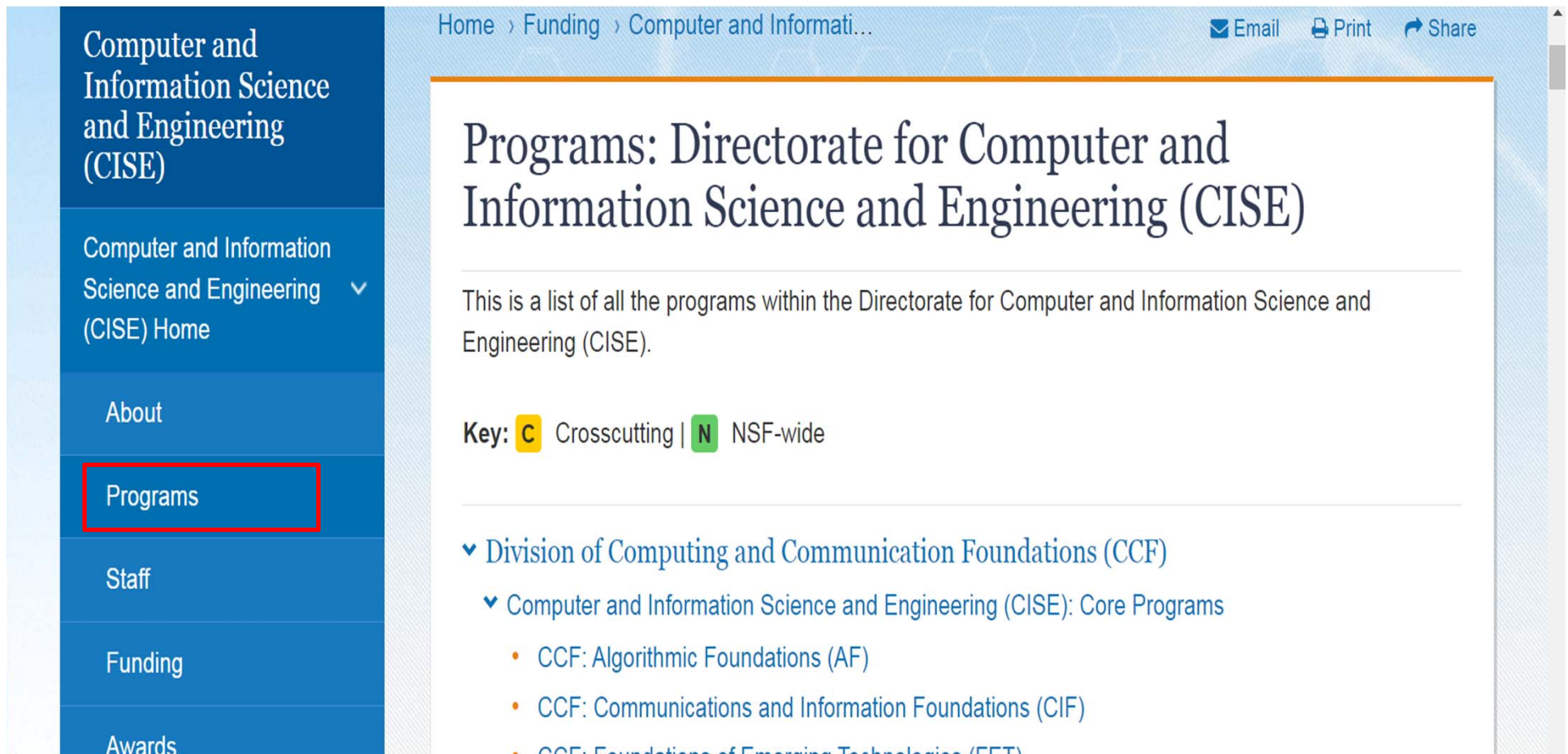
# NSF Program

- Each Directorate has a list of programs they fund
- Select any program to find...
  - Summary of the Program
  - Program Solicitation
  - Deadline Dates
  - Contact Information
  - Frequently Asked Questions
  - Webinars
  - List of previous awards



# Finding Funding with NSF

Each Directorate has a list of programs they fund  
Select any for details



The screenshot shows the NSF website's navigation menu on the left and the main content area on the right. The navigation menu includes links for 'Computer and Information Science and Engineering (CISE)', 'Computer and Information Science and Engineering (CISE) Home', 'About', 'Programs' (highlighted with a red box), 'Staff', 'Funding', and 'Awards'. The main content area displays the title 'Programs: Directorate for Computer and Information Science and Engineering (CISE)' and a key for program types: 'C' for Crosscutting and 'N' for NSF-wide. Below the key, a list of programs is shown, including 'Division of Computing and Communication Foundations (CCF)' and 'Computer and Information Science and Engineering (CISE): Core Programs'.

Home › Funding › Computer and Informati...

Email Print Share

## Programs: Directorate for Computer and Information Science and Engineering (CISE)

This is a list of all the programs within the Directorate for Computer and Information Science and Engineering (CISE).

**Key:** **C** Crosscutting | **N** NSF-wide

- ▼ Division of Computing and Communication Foundations (CCF)
  - ▼ Computer and Information Science and Engineering (CISE): Core Programs
    - CCF: Algorithmic Foundations (AF)
    - CCF: Communications and Information Foundations (CIF)
    - CCF: Foundations of Emerging Technologies (FET)

# Review Awards

Review previous awards for subject, funding amount, etc.

Award Number	Title	NSF Organization	Programs	Start Date	Principal Investigator	Co-Principal Investigator	State	Organization	Awarded Amount To Date	Program Officer
2145811	CAREER: Genomic, cellular, and physiological effects of whole genome duplications on organismal energy production	IOS	Cross-BIO Activities	02/01/2022	Sharbrough, Joel		NM	New Mexico Institute of Mining and Technology	\$305,199.00	Gerald Schoenk
2046670	CAREER: An Efficient First-Principles Method for Calculating Deformation Properties, Diffusivity, and Secondary Creep-Rate Behavior in BCC High-Entropy Alloys	DMR	CONDENSED MATTER & MAT THEORY , EPSCoR Co-Funding	08/01/2021	Hargather, Chelsey		NM	New Mexico Institute of Mining and Technology	\$308,995.00	Serdar C
2046043	CAREER: Self-consistent and Data-constrained Simulations of the Leader and Return Stroke Processes in Lightning Discharges	AGS	Physical & Dynamic Meteorology	08/01/2021	da Silva, Caitano		NM	New Mexico Institute of Mining and Technology	\$523,159.00	Chungu
2039674	CAREER: Partitioning of Rare Earth Elements (REE) Between Minerals and Aqueous Fluids in Ore Deposits	EAR	Petrology and Geochemistry , EDUCATION AND HUMAN RESOURCES , Integrat & Collab Ed & Research	06/01/2020	Gysi, Alexander		NM	New Mexico Institute of Mining and Technology	\$342,166.00	Dennis C
1652944	CAREER: Integrated Research and Education on Delta-Sigma Based Digital Signal Processing Circuits for Low-Power Intelligent Sensors	ECCS	CCSS-Comms Circuits & Sens Sys	02/15/2017	Tang, Wei		NM	New Mexico State University	\$500,000.00	Svetlana Lucic

# Sample Cover Page of a Solicitation

## Faculty Early Career Development Program (CAREER)

Includes the description of NSF Presidential Early Career Awards for Scientists and Engineers (PECASE)

PROGRAM SOLICITATION  
NSF 20-525

Program Solicitation Number

REPLACES DOCUMENT(S):  
NSF 17-537



National Science Foundation  
Directorate for Biological Sciences  
Directorate for Computer and Information Science and Engineering  
Directorate for Education and Human Resources  
Directorate for Engineering  
Directorate for Geosciences  
Directorate for Mathematical and Physical Sciences  
Directorate for Social, Behavioral and Economic Sciences  
Office of Integrative Activities  
Office of International Science and Engineering

NSF Directorates and Offices  
providing funding for this  
opportunity

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

August 11, 2020

July 26, 2021

Fourth Monday in July, Annually Thereafter

Due Date

Research Office



# Solicitation – Eligibility Information

## Eligibility Information

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### Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

### Who May Serve as PI:

A Principal Investigator (PI) may submit only one CAREER proposal per annual competition. In addition, a Principal Investigator may not participate in more than three CAREER competitions. Proposals that are not reviewed (i.e., are withdrawn before review or are returned without review) do not count toward the three-competition limit.

### Limit on Number of Proposals per Organization:

There are no restrictions or limits.

### Limit on Number of Proposals per PI or Co-PI: 1

An eligible Principal Investigator may submit only one CAREER proposal per annual competition.

# Solicitation Project Description

## The Cover Sheet:

- **Program Solicitation Number.** FastLane users: Select the CAREER program solicitation number shown at the beginning of this solicitation from the drop-down menu. Research.gov Users: Select the CAREER program solicitation number in Step 1 of the Prepare New Proposal Wizard (Funding Opportunity). Grants.gov users: The program solicitation will be pre-populated by Grants.gov on the NSF Grant Application Cover Page.
- **NSF Unit of Consideration.** Select at least one specific core program from the drop-down list in FastLane as the NSF program(s) to consider the proposal. Research.gov users: Select at least one specific core program in Step 2 of the Prepare New Proposal Wizard (Where to Apply). Grants.gov users should refer to Section VI.1.2. of the NSF Grants.gov Application Guide for specific instructions on how to designate the NSF Unit of Consideration. For assistance in determining which program(s) to choose, refer to the NSF [Guide to Programs](#), which provides descriptions of NSF research-supporting programs.
- **Project Title.** The project title must begin with "CAREER:" and follow with an informative title.
- **Co-PIs.** No co-PIs are permitted on the Cover Sheet.

## Project Description:

The Project Description section should contain a well-argued and specific proposal for activities that will, over a 5-year period, build a firm foundation for a lifetime of contributions to research and education in the context of the Principal Investigator's organization. The proposed project should aim to advance the employee's career goals and job responsibilities as well as the mission of the department or organization. The Project Description may not exceed 15 pages.

The Project Description should include:

- a description of the proposed research project, including preliminary supporting data where appropriate, specific objectives, methods and procedures to be used, and expected significance of the results;
- a description of the proposed educational activities and their intended impact;
- a description of how the research and educational activities are integrated or synergistic;
- a description of other broader impacts, besides the education activities, that will accrue from the project; and
- results of prior NSF support, if applicable.

Successful applicants will propose creative, effective research and education plans, along with strategies for assessing these components. The proposed activities should help applicants develop in their careers as both outstanding researchers and educators. While excellence in both education and research is expected, activity of an intensity that leads to an unreasonable workload is not. The research and educational activities do not need to be addressed separately if the relationship between the two is such that the presentation of the integrated project is better served by interspersing the two throughout the Project Description.



# Program Contacts

## VIII. AGENCY CONTACTS

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General inquiries regarding this program should be made to:

- Division CAREER contacts listed on the CAREER web page at: <https://www.nsf.gov/crssprgm/career/contacts.jsp>
- Faculty Early Career program, telephone: (703)292-5111, email: [nsf-ccc@nsf.gov](mailto:nsf-ccc@nsf.gov)

For questions related to the use of FastLane or Research.gov, contact:

- FastLane and Research.gov Help Desk: 1-800-673-6188  
FastLane Help Desk e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).  
Research.gov Help Desk e-mail: [rgov@nsf.gov](mailto:rgov@nsf.gov)

For questions relating to Grants.gov contact:

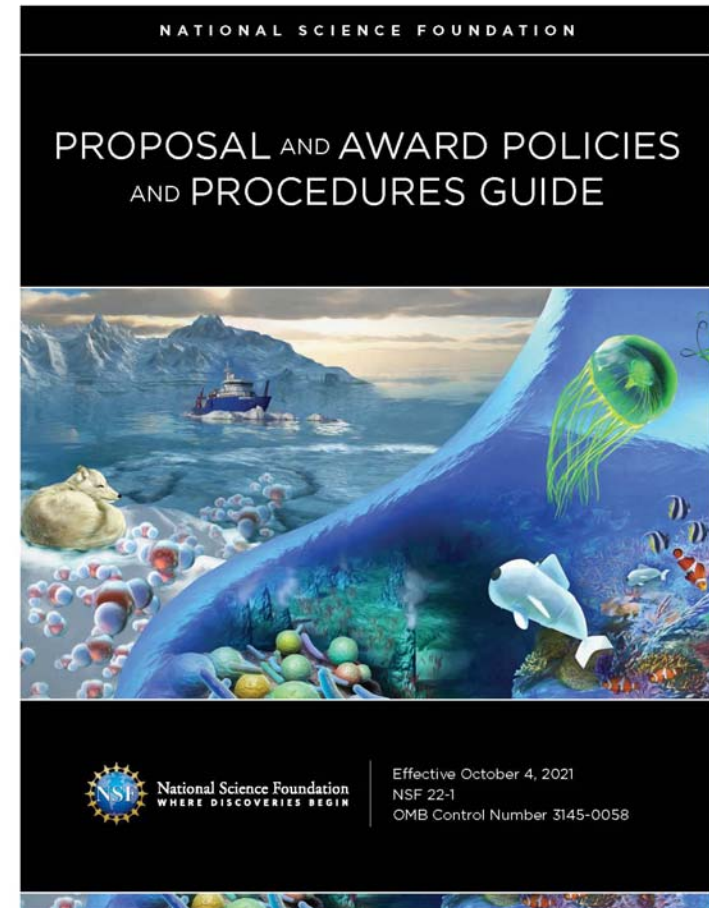
- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: [support@grants.gov](mailto:support@grants.gov).

**CAREER Directorate and Division Contacts:**  
<https://www.nsf.gov/crssprgm/career/contacts.jsp>

# Where are the Directions?

- **Proposal & Award Policies & Procedures Guide (PAPPG)**
- Part I is NSF's proposal preparation and submission guidelines
- Part II is NSF's award and administration guidelines
- Released every year

[https://www.nsf.gov/pubs/policydocs/pappg22\\_1/nsf22\\_1.pdf](https://www.nsf.gov/pubs/policydocs/pappg22_1/nsf22_1.pdf)



# Collaboration with Single Proposal vs Collaborative Proposal with Multiple Organizations

- Submission of a collaborative proposal from one organization – Lead submits entire proposal and makes subawards to partners. PI uploads all Biosketches, C&P, Collaborators, Budget, etc.
- Submission of a collaborative proposal from multiple organizations – Each partner uploads their own documents and receives an award directly from NSF

# Collaborative Proposal Submitted from Multiple Organizations

## Lead Organization

- Cover sheet
- Biographical Sketch(es)
- Budget & Budget Justification
- Current & Pending Support
- Facilities, Equipment & Other Resources
- Collaborators & Other Affiliations
- **Project Summary**
- **Project Description**
- **References**
- **Data Management Plan**
- **Postdoctoral Mentoring Plan**

## Non-lead Organization(s)

- Cover Sheet
- Biographical Sketch(es)
- Budget & Budget Justification
- Current and Pending Support
- Facilities, Equipment & Other Resources
- Collaborators & Other Affiliations

# Proposal Documents

- **Project Summary**
- **Project Description**
- **References**
- Biographical Sketch
- Current and Pending Support
- Collaborators & Other Affiliations
- Facilities, Equipment & Other Resources
- Letters of Support
- Budget Justification
- Data Management Plan
- Postdoc Training Plan
- Suggested Reviewers
- Check the RFP for additional documents



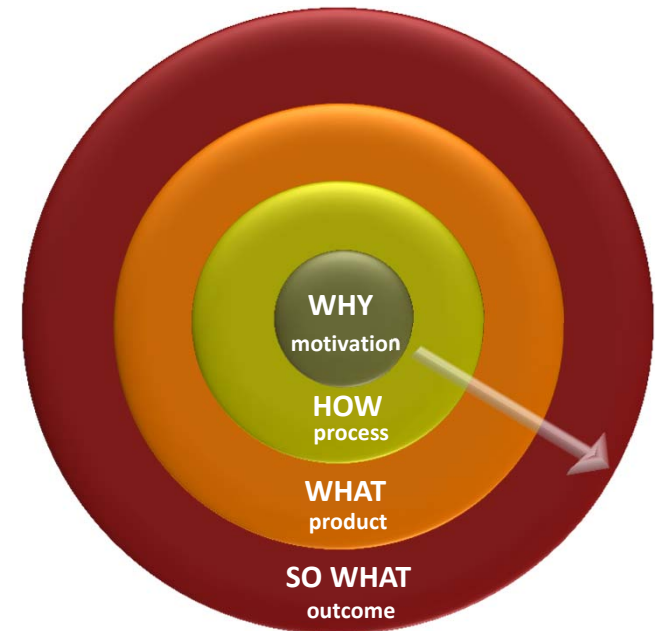


# Project Summary

- research.gov will display three separate text boxes (headings not required)
  - Overview: Description of the activity and brief description of objectives and methods
  - Intellectual Merit: Potential of the proposed activity to advance knowledge
  - Broader Impacts: Potential of the proposed activity to benefit society and contribute to the achievement of specific, desired social outcomes
- Allows you to upload a pdf document if you have special characters
  - do not to exceed 1 page (4700 characters)
- Proposals that do not separately address the overview and both merit review criteria within the 1 page will be returned without review
- Read the RFP – sometimes they ask for additional information
- ***Remember, the Project Summary Is Not an Abstract***

# Project Description

- Proposers should address:
  - what they want to do,
  - why they want to do it,
  - how they plan to do it,
  - how they will know if they succeed, and
  - what benefits could accrue if the project is successful
- Required Sections
  - Results from Prior NSF Support
  - Broader Impacts



*Be sure to check your program RFP for specific requirements*

# Results of Prior NSF Support

- Submit for PI and all Co-PIs
- If PI has more than one, submit the one closest to the current proposal
- Information for the past 5 years, including current funding, even if it is for unrelated work or there was no salary support
- NSF award number, amount, period of support, title
- Summary of the results of the completed work, including accomplishments related to Intellectual Merit and Broader Impacts
- Publications resulting from the NSF award
- Evidence of research products and their availability
- If current proposal is for renewed support, a description of the relation of the completed work to the proposal
- No more than 5 pages

*Reviewers will be asked to comment on quality of prior work*

# Broader Impacts

- How well does the activity advance discovery and understanding while promoting teaching, training, and learning? (Integration of education with research required of all NSF proposals)
- Should be related to your research project
- How well does the proposed activity broaden the participation of underrepresented groups?
- To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- Will the results be disseminated broadly to enhance scientific and technological understanding?
- What may be the benefits of the proposed activity to society?

# Characteristics of Good Broader Impacts

- Include strategy to achieve impact
- Have a well-defined set of expected outcomes
- Include evaluation of impact
- Make results meaningful and valuable
- Make consistent with technical project tasks
- Have detailed plan of activities
- Provide rationale to justify activities
- May add budget for broader impact activities



# Facilities, Equipment & Other Resources

- Describe the facilities and equipment to do your proposed work
- Reviewers use to assess the adequacy of the resources available to perform the effort
- Describe only those resources that are directly applicable
- Include off-site facilities if used
- Include non-funded collaborations (include a letter of support)

# Letters of Support

**Letter should consist of a single-sentence statement of collaboration:**

- “If the proposal submitted by Dr. [name of the PI] entitled [proposal title] is selected for funding by the NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment and Other Resources section of the proposal.”
- Must NOT recommend or endorse PI or project

**All relevant collaborative activities should be described in the Project Description, or in the Facilities, Equipment and Other Resources pages, such as:**

- Intellectual contributions to the project
- Permission to access a site, use instrumentation or facility
- Offer to furnish samples / materials for research
- Logistical support / evaluation services

# Budget Justification

- Each proposal must contain a budget for each year of support requested. The budget justification must be no more than five pages per proposal.
- The amount for indirect costs should be calculated by applying the current negotiated indirect cost rate(s) to the approved base(s), and such amounts should be specified in the budget justification. Specify rate and amount.
- For proposals that contain a subaward(s), each subaward must include a separate budget justification of no more than five pages.

# Data Management Plan

- All proposals are required to include, as a supplementary doc, a Data Management Plan of up to two pages.
  - The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project;
  - Standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies);
  - Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
  - Policies and provisions for re-use, re-distribution, and the production of derivatives; and
  - Plans for archiving data, samples, and other research products, and for preservation of access to them.
- <https://www.nsf.gov/bfa/dias/policy/dmp.jsp>
- Data Management Plan Tool - <https://dmptool.org/>

# Postdoc Mentoring Plan

- Proposals that include funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals.
- Provide career counseling, training in the preparation of grant proposals, or training in responsible professional practices.
- Develop publications and presentations.
- Offer guidance on techniques to improve teaching and mentoring skills.
- Provide counseling on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas.





# Biographical Sketch

- Up to 3 pages
- Professional Preparation
- Appointments
- Products – only 10 allowed
  - 5 closely related to the project
  - 5 other significant
- Synergic Activities – broader impact of scholarly work

**You MUST use an NSF approve format - [www.nsf.gov/bfa/dias/policy/biosketch.jsp](http://www.nsf.gov/bfa/dias/policy/biosketch.jsp)**

- NSF fillable PDF - file:///C:/Users/jrmcs/Downloads/biosketch.pdf
- SciENcv - <https://www.ncbi.nlm.nih.gov/sciencv/>
- Webinar - <https://nsfpolicyoutreach.com/resources/april-2020-nsf-approved-formats-for-proposals/>

# Current and Pending Support

- PI, Co-PIs, and senior personnel
- Ongoing projects and proposals, **including the proposed project**
- Include unfunded projects with time commitment
- All sources of funding must be listed (federal, state, local or foreign government agencies, public or private foundations, industrial/commercial organizations)
- Concurrent submission of a proposal to other organizations will not prejudice review of the proposed project
- You must submit all the pages – research.gov will delete extra pages
- **You MUST use an NSF approve format -**  
<https://www.nsf.gov/bfa/dias/policy/cps.jsp>
- NSF fillable PDF - <file:///C:/Users/jrmcs/Downloads/cps.pdf>
- FAQs - [https://www.nsf.gov/bfa/dias/policy/cps\\_faqs/currentandpendingfaqs\\_jan2022.pdf](https://www.nsf.gov/bfa/dias/policy/cps_faqs/currentandpendingfaqs_jan2022.pdf)
- SciENCv - <https://www.ncbi.nlm.nih.gov/sciencv/>
- Webinar - <https://nsfpolicyoutreach.com/resources/april-2020-nsf-approved-formats-for-proposals/>

# SciENcv Help

- SciENcv <https://www.ncbi.nlm.nih.gov/sciencv/>
- SciENcv Tutorial  
<https://www.youtube.com/watch?v=PRWy-3GXhtU&feature=youtu.be>
- SciENcv Help
- <https://www.ncbi.nlm.nih.gov/books/NBK154494/>

# Collaborators & Other Affiliations

- You must list in separate tables
  - Advisors and Advisees
  - Personal, family, business relationships
  - Editorial Boards, Editor-in-chief, Co-editors
  - Co-authors, collaborators on projects
- **You MUST use the NSF Template**

<https://www.nsf.gov/bfa/dias/policy/coa.jsp>

# Review Criteria

- Every NSF proposal is evaluated using two overarching review criteria
  - Intellectual Merit
  - Broader Impacts
- May be program specific criteria – check your RFP



# Review Elements

- The following elements considered in the review for **both criteria**:
- What is the potential for the proposed activity to
  - Advance knowledge and understanding within its own field or across different fields (**Intellectual Merit**)?
  - Benefit society or advance desired societal outcomes (**Broader Impacts**)?
- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
- How well qualified is the individual, team, or institution to conduct the proposed activities?
- Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?



# Funding Rates by Directorate - 2019

Directorate	# of Awards	Funding Rate	Funding Amount	Time to Decision
Biology	1,053	34%	174,102	5.5 months
Computer Information Sciences/Eng	2,009	23%	160,612	5.7 months
Education & Human Resources	844	22%	199,929	5.5 months
Engineering	2,388	26%	127,012	4.7 months
Geosciences	1,539	38%	148,568	6.7 months
Mathematical & Physical Sciences	2,414	30%	114,600	6.8 months
Social & Behavioral Sciences	877	23%	81,512	5.5 months
<b>NSF Overall</b>	<b>11,251</b>	<b>27%</b>	<b>\$133,333</b>	<b>5.7 months</b>

# NSF Proposal & Award Process



# Resources

- Proposal & Award Policies & Procedures Guide  
[www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=papp](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp)
- NSF Strategic Plan for Fiscal Years 2018-2022  
[https://www.nsf.gov/about/performance/strategic\\_plan.jsp](https://www.nsf.gov/about/performance/strategic_plan.jsp)
- Report to the NSB on Merit Review  
<https://www.nsf.gov/nsb/publications/pubmeritreview.jsp>
- Fiscal Year 2022 Budget Request  
<https://www.nsf.gov/about/budget/fy2022/index.jsp>
- SciENCv - <https://www.ncbi.nlm.nih.gov/sciencv/>
- NSF Bioskech - <https://www.nsf.gov/bfa/dias/policy/biosketch.jsp>
- NSF Current & Pending Support  
<https://www.nsf.gov/bfa/dias/policy/cps.jsp>
- NSF Collaborators - <https://nsf.gov/bfa/dias/policy/coa.jsp>

# Research.gov

Fastlane is being discontinued, you will need to submit your proposal through research.gov

Video on using research.gov

<https://nspfpolicyoutreach.com/resources/fall-2021-virtual-grants-conference-research-gov-update-and-demonstration/>



[Sign In](#) | [Register](#) | [Home](#) | [Contact](#) | [Help](#) | [About](#)

**i** Effective February 28, 2022, NSF transitions from DUNS number to the New System for Award Management (SAM) Unique Entity Identifier (UEI) in NSF systems. Click [here](#) for what you need to know.

**i** Now Available: New Login.gov option to sign in to Research.gov. Choose the Login.gov option from sign in screen, enter Login.gov credentials, and link/activate NSF ID. Click [here](#) for details.

[Hide all notifications](#) (Viewing 2 of 2 notifications)

## Prepare and submit proposals in Research.gov!

### NEW Proposal Types Supported:

- Center
- Research Infrastructure

### NEW Submission Types Supported:

- Preliminary Proposal
- Full Proposal related to a Preliminary Proposal

### NEW Proposal Feature Supported:

- Project Descriptions Exceeding 15 Pages

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION				
PROGRAM ANNOUNCEMENT/QUALIFICATION NO./DUE DATE		<input type="checkbox"/> Special Exception to Deadline Date Policy		
FOR CONSIDERATION BY NSF ORGANIZATION(LINE) (includes the most specific unit known, i.e. program, division, etc.)				
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Use Universal Numbering System)
EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)		SHOW PREVIOUS AWARD NO. IF THIS IS: <input type="checkbox"/> A RENEWAL <input type="checkbox"/> AN ACCOMPLISHMENT-BASED RENEWAL		IS THIS PROPOSAL SERVED BY AGENCY? YES <input type="checkbox"/> NO <input type="checkbox"/>
NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE			ADDRESS OF AWARDING ORGANIZATION, INCLUDING ZIP	
AWARDEE ORGANIZATION			<b>FAQs, How-to Guides &amp; Videos</b>	
NAME OF PRIMARY PLACE OF PERFORM			ADDRESS OF PRIMARY PLACE OF PERFORM, INCLUDING ZIP	