

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

- “A Foundation-wide activity that offers the National Science Foundation’s most prestigious awards in support of 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.**”



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

- Deadline change to the 4th Wednesday in July (July 26th, 2023 is the next submission date)
- Addition of a clarification sentence in the departmental chair letter to state that the Chair Letter is not a support letter.
- Edits in the PECASE language that adds the additional requirement for the PI candidate to reflect commitment to STEM equity, diversity, accessibility, and/or inclusion. The language also updates the new allocation of PECASE candidates for NSF.
- Inclusion of new single copy document for PIs to include that states their eligibility for PECASE. It is not a required document. There is an opportunity for the PI to submit this “certification” post award via an interim report to the cognizant program officer if they did not have the required status as of their submission date.
- CAREER submission will be through Research.gov or Grants.gov.



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

- **Next Deadline:** July 26, 2023 (Wednesday), 5pm local time, Independent of NSF Division or Program
- **Future Years:**
 - Fourth Wednesday in July, Annually Thereafter
- **FAQs Document NSF 22-100:** www.nsf.gov/career
[FAQs Document NSF 22-100](#)



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

- Submission is through Research.gov or Grants.gov
- Check out the submission logistics webinar on June 6, 2023 from 3:00pm to 4:00pm eastern
- Part of the NSF Virtual Grants Conference (Free)
- <https://new.nsf.gov/events/nsf-career-proposal-submission-logistics-webinar-1/2023-06-06>
- Submit logistics questions to careerproposalprep@nsf.gov



CAREER or Regular proposal?

- CAREER proposals are ***single-PI*** projects that include research and education activities that are integrated, innovative, and ambitious
- CAREER proposals require a Departmental Chair letter
- The CAREER program's aims are lofty – CAREER awards are a lot of work
- Are you at the right stage in your career to undertake the commitments of a CAREER award?
- Have you discussed your ideas with mentors / peers / program directors?
- Have you demonstrated commitment to both research and education?



Investigator Eligibility Criteria

- Hold a doctoral degree by proposal deadline
- Be untenured and employed in an at least 50% tenure-track (or tenure-track-equivalent) assistant professor (or equivalent title) position at an eligible institution as of the annual deadline
- Have both research and educational responsibilities at the eligible institution
- Have not previously received a CAREER award
- Have not had more than two CAREER proposals reviewed previously
- Eligibility certified in Departmental Letter



Investigator Eligibility Criteria-Non Tenure

- Any non-tenure track faculty is potentially eligible
- Adjunct faculty not eligible
- Continuing appointment that is expected to last the five years of the CAREER award
- Appointment has substantial research and educational goals
- Early career equivalent to pre-tenure
- All other eligibility requirements also apply
- Eligibility certified in Departmental Letter



CAREER Personnel and Budgets

- Co-PIs on cover sheet are not allowed
- Request for support of other senior personnel, consultants, or sub-awards is allowed, commensurate with a limited role in the project
- International activities are encouraged and may be supported by the Office of International Science and Engineering (OISE)
- Programs may support buy-out of academic year time for teaching-intensive institutions (check with your Program Director)
- Programs may or may not prefer to make awards with budget close to the anticipated minimum size (check with your Program Director)



Unfunded Collaborators

- Follow requirements of PAPPG 23-1, ex. section Chapter II.C.2.d(iv)
- Any substantial collaboration with individuals not included in the budget should be described in the Facilities, Equipment and Other Resources section of the proposal (see Chapter II.C.2.i) and documented in a letter of collaboration from each collaborator.
- Such letters should be provided in the supplementary documentation section in Research.gov and follow the format specified in Chapter II.C.2.j. Collaborative activities that are identified in the budget should follow the instructions in Chapter II.D.3.
- Unfunded collaborators like senior personnel should have a limited role in the project's intellectual merit and broader impacts



CAREER varies across NSF

- CAREER proposals are submitted to, and reviewed by, one or more of the disciplinary research programs
- Typical award sizes vary according to Directorate/Division/Program
- Expectations for scope of research and education activities vary with disciplinary community norms
- Contact relevant Program Directors to discuss your ideas and seek more information. If need help to identify a suitable program, contact Division Contact(s) - <http://www.nsf.gov/crssprgm/career/contacts.jsp>
- For interdisciplinary proposals, contact all relevant Program Directors or Division Contacts



Merit Review of CAREER varies across NSF

- Ad hoc & Panel (review with other proposals under consideration by the disciplinary program):
 - most of GEO (AGS uses ad hoc only)
 - BIO and SBE
- Primarily dedicated CAREER Panels :
 - ENG, CISE, EHR
- MPS varies by Division:
 - AST : Panel only
 - CHE, DMR – Mix of ad hoc & panels
 - DMS – Mostly panel
 - PHY – Mostly ad hoc



CAREER Proposal Criteria

- Evaluated using NSF's two merit review criteria:
 - What is the intellectual merit of the proposed activity?
 - What are the broader impacts of the proposed activity?
- Additional Consideration for CAREER proposals
 - Integration of Research and Education



NSF Merit Review Criteria

The following elements should be considered for **INTELLECTUAL MERIT** and **BROADER IMPACTS**

1. What is the potential for the proposed activity to:
 - a) **INTELLECTUAL MERIT:** Potential to advance knowledge; and
 - b) **BROADER IMPACTS:** Potential to benefit society and contribute to the achievement of specific, desired societal outcomes
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. 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?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?

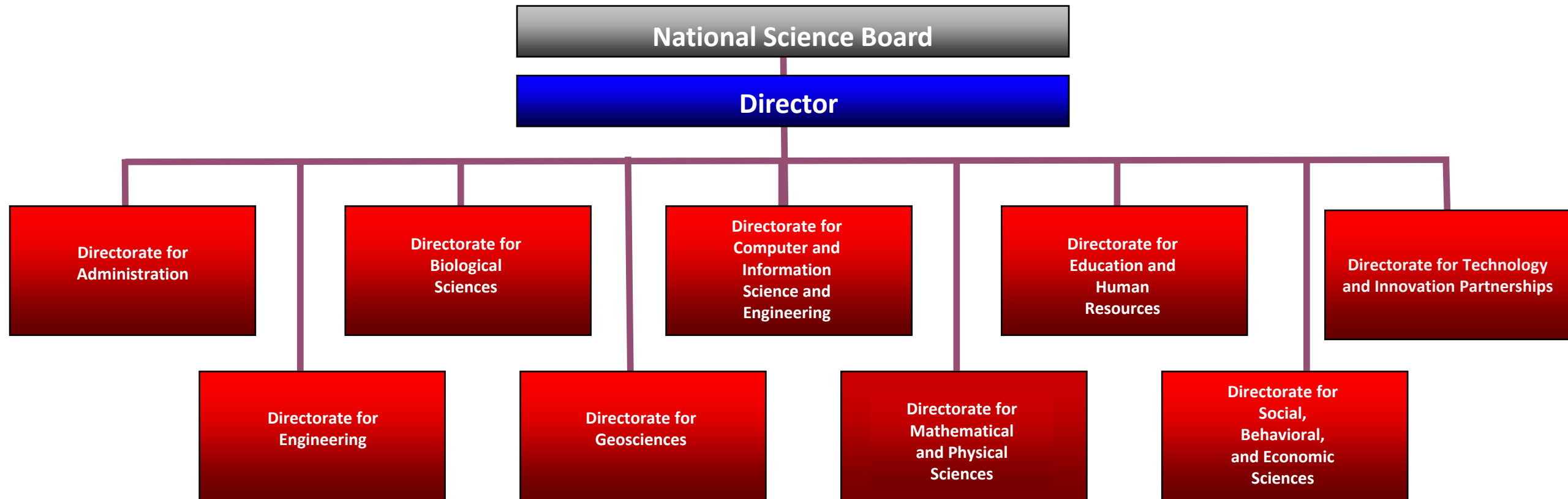


Integration of Research and Education

- All CAREER proposals must have an integrated research and education plan at their core.
- NSF recognizes that there is no single approach to an integrated research and education plan; but encourages all applicants to think creatively about how their research will impact their education goals and, conversely, how their education activities will feed back into their research.
- These plans should reflect the proposer's own disciplinary and educational interests and goals, as well as the needs and context of his or her organization.
- Because there may be different expectations within different disciplinary fields and/or different organizations, a wide range of research and education activities may be appropriate for the CAREER program



NSF is Organized Around Research Topics



The Next Step: You submit to a program

- Look at NSF's web site: www.nsf.gov and www.nsf.gov/funding
 - Check out research programs
 - Read what research topics they support
 - Abstracts for recent awards
 - Workshop reports
- Not sure who to contact with idea? Check out the division and directorate CAREER Contacts:
<https://www.nsf.gov/crssprgm/career/contacts.jsp>



Award Search Capabilities

<http://www.nsf.gov/awardsearch>

NSF Award Search: Advanced Search - Internet Explorer

https://www.nsf.gov/aw... Nation... NSF Award Search: Advan... x

File Edit View Favorites Tools Help

Play Daily Crossword - Th... Log In - NSF Wiki Home - Executive Develo... IPA Performance Manage... Microsoft Forefront TMG Employee Express - Home... Suggested Sites

Awards Advanced Search

[Overview of Award Search Features](#)

Awardee Information

Principal Investigator First Name

Principal Investigator Last Name

☐ Include Co-Principal Investigator in name search

Organization

State

Zip Code

Country

Program Information

NSF Organization

Element Code

☐ Any ☒ All

Reference Code

☐ Any ☒ All

HINT: The "Program" box searches both program element and program reference names and codes.

Program

Program Officer

Additional Information

Keyword

HINT: The Keyword field searches on the title and abstract only.

☐ Search Award Title Only

Award Number

From To

Award Amount

Award Instrument

HINT: Data prior to 1976 may be less complete.

☒ Active Awards ☐ Expired Awards

Original Award Date From To

Start Date From To

End Date From To

Search Reset



Award Abstracts

ABSTRACT

This Faculty Early Career Development (CAREER) grant will provide fundamental understanding of a novel technique to fabricate complex micro optics through generating surface textures on bulk metallic glasses. Micro optics with surface textures play a significant role in broad applications, such as automotive illumination systems, high-resolution display panels, diffraction gratings for laser systems, and reflective mirrors for traffic safety. Bulk metallic glasses have been increasingly used in fabricating micro optics due to high hardness, high corrosion resistance and no surface defects. However, micro optics produced with existing techniques using bulk metallic glasses usually have high fabrication cost, limited geometric accuracy and surface quality due to thermal deformations of the material. This Faculty Early Career Development (CAREER) award supports fundamental research of a novel technique to fabricate complex micro optics through generating surface textures on bulk metallic glasses by diamond machining with applied vibrations. The new technique will significantly reduce production cost, and improve component quality (both geometric accuracy and surface roughness). The award also supports activities to integrate research results into education, expose the public to precision manufacturing and optics engineering, and prepare next-generation engineers in advanced manufacturing areas.

In the new technique, the planar vibration of the workpiece causes intermittent tool-workpiece contact, resulting in high-frequency variations of temperature and stress in material removal region. The first research



Suggested Proposal Submission Timeline

- It is important to communicate with your sponsored research office (SRO) on their timeline for submitting your proposal to plan your timeline
- In the solicitation 22-586 refer to **Section V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS** and review the suggested proposal submission timeline document
- The document gives guidance on common questions on submitting via Research.gov or Grants.gov

https://www.research.gov/common/attachment/Common/Career_deadline.pdf



We encourage you to contact Program Directors

- Email the appropriate program director(s) and ask if your research project fits their program
 - One-page summary (preferred)
- Your program director can:
 - Confirm program fit
 - Give advice on common proposal preparation errors
 - Help you understand the review of a previous proposal
 - Point you to resources you can use to help write a better proposal next time
 - Give general guidance on good proposal writing



CAREER Proposal Ingredients

- An integrated plan for research and education, ambitious but feasible
- Compelling argument that project will achieve effective integration of or synergy between research and education activities
- Departmental Letter demonstrating commitment to the career development of the investigator
- A budget that is consistent with the scope of the research and education activities



Take home: Proposal Basics

- Your proposal will be evaluated by the reviewers
- Reviewers need to know just a few things:
 - What is it about (the research objective)?
 - How will you do it (the technical approach)?
 - Can you do it (you and your facilities)?
 - Is it worth doing (intellectual merit and broader impacts)?
 - Will the effort provide a firm foundation for your career plans (integration of education and research)?
- This is, basically, all the proposal needs to convey – but it needs to convey this



Volunteer to Be a Reviewer

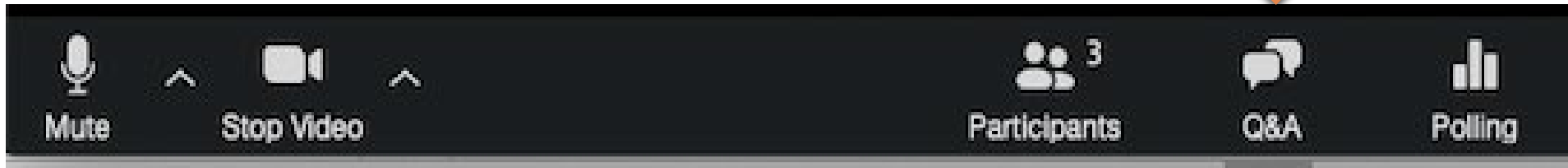
- Proposal review is an important service to your community
- There's no better way to see how the system works
- There's no better way to understand what makes a proposal compelling
- Email the program officer of the program your expertise aligns with and include a 2-page NSF biosketch and keywords on your expertise for interest in reviewing





Questions?

Carole Read, cread@nsf.gov



CAREER PROPOSAL SUBMISSION LOGISTICS WEBINAR

June 6, 2023 3pm to 4:00 pm eastern

Sign up:

Part of the FREE Spring 2023 NSF Virtual Grants Conference—Registration Required

