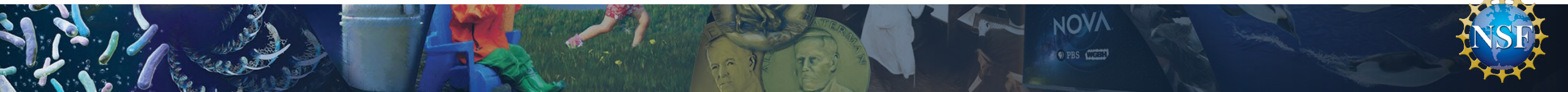# Welcome! 2020 CBET CAREER Webinar & Breakout Sessions

- Attendees will be in listen-only mode during the information session.
- Join cluster breakout rooms at 1:30PM with CAREER awardees and NSF program directors for questions
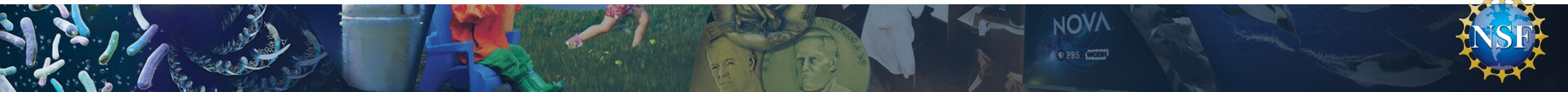
2020 CBET CAREER Program Briefing

Carole J. Read
NSF CAREER Coordinating
Committee
May 22, 2020

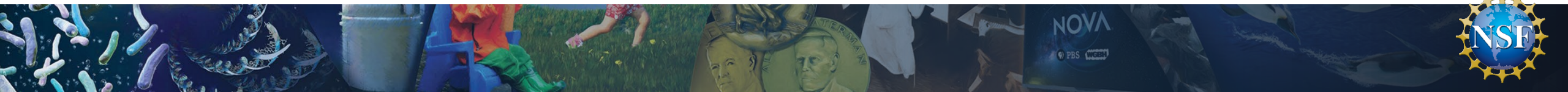# Faculty Early Career Development (CAREER) Program (NSF 20-525): Goals

- "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**."

CAREER Program: Goals

- Emphasizes the importance NSF places on early development of academic careers in which the excitement of research is enhanced by inspired teaching and dissemination of new knowledge

- Aims to provide stable support at a sufficient level and duration to enable awardees to develop careers not only as outstanding researchers but also as effective, committed educators

- Aims to encourage faculty and academic institutions to value and support the integration of research and education, in which the process of discovery stimulates learning and assures that research findings are quickly and effectively communicated in a broader context and to a large audience

Faculty Early Career Development (CAREER) Program (NSF 20-525)
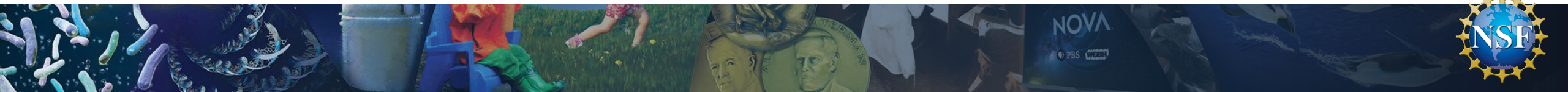
- **Next Deadline:** July 27, 2020, Independent of NSF Division or Program

- **Future Years:**
  - Fourth Monday in July, Annually Thereafter

- **FAQs Document:** www.nsf.gov/career
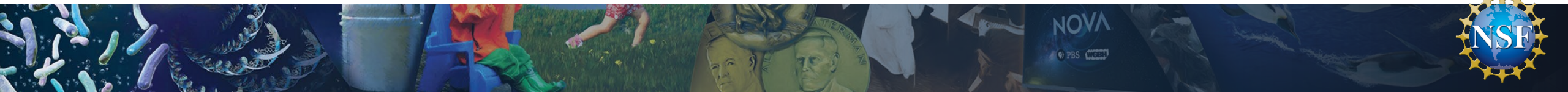
NSF 20-525 Revision Notes

- PI needs to meet eligibility criteria as of the annual deadline

- Clarification regarding minimum percentage appointment for eligibility to the program (50%)

- Only one annual deadline applies to all CAREER submissions

- Eligibility requirements have been revised to clarify the required early-career status of applicants.

- Support for senior personnel other than the PI that is commensurate with a limited collaborative role in the project is now allowed in the budget of the proposal or of a sub recipient (sub award).
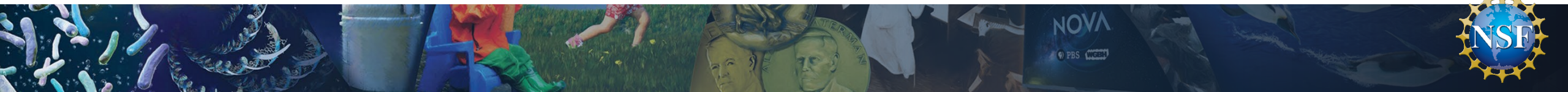
Investigator Eligibility Criteria

- 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
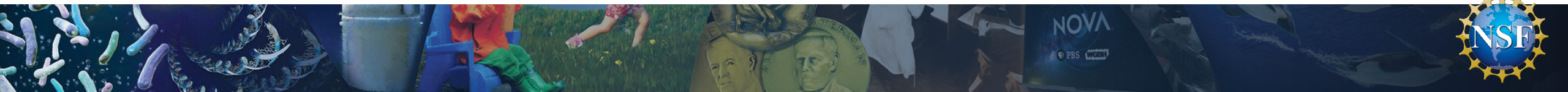
CAREER or Regular proposal?

- CAREER proposals are **_single-PI_** projects that include research and education activities that are integrated, innovative, and ambitious

- CAREER proposals require a letter of support from the Department Chair

- 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 officers?

- Have you demonstrated commitment to both research and education?

CAREER Project Budgets for ENG

- Read the solicitation NSF 20-025 and FAQs; follow PAPPG 20-1

- CAREER budget requests should reflect the scope of the research and education plans, and the practices within your discipline

- For ENG, the minimum CAREER award size is expected to be $500,000, including indirect cost or overhead, for a 5- year period

- Final budgets are negotiable if selected for award

- Consider sufficient financial support for you as a PI and for a graduate student

- 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
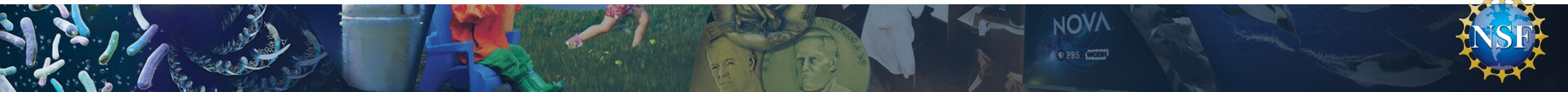
CAREER Proposal Ingredients

- 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

- Letters of Collaboration (not of support or endorsement) when appropriate

- A budget that is consistent with the scope of the research and education activities
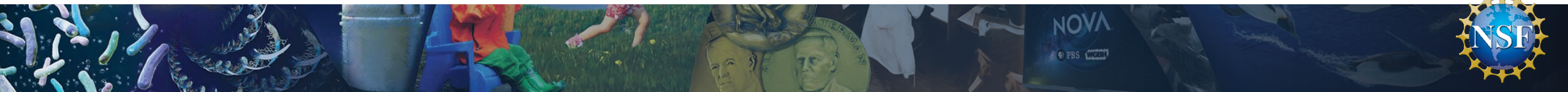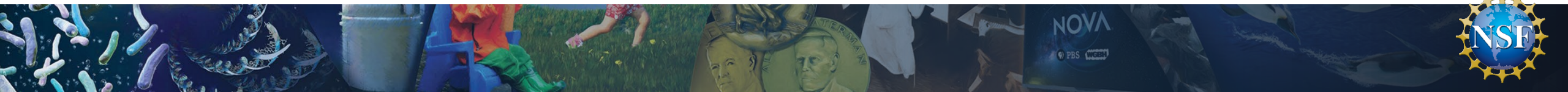
Integration of Research and Education

- Think creatively about the reciprocal relationship between research and education activities and how they may inform each other in your career development

- Plans should reflect your own disciplinary and educational interests and goals, as well as the needs and context of your organization

- There are different expectations within different disciplinary fields – a wide range of research and education activities may be appropriate for the CAREER program

- Some investigators may wish to pursue an additional activity such as entrepreneurship, industry partnerships, or policy that enhances their research and education plans

- See the CAREER program solicitation for thought-provoking examples

- Communicate with the CAREER contact(s) in the Division(s) closest to your area of research to discuss expectations

Departmental Letter (2 pages)

- Statement indicating the PI's eligibility for the CAREER program

- Description of how the PI's career goals and responsibilities mesh with that of the organization and department

- Commitment to the PI's proposed CAREER research and education activities

- Description of how the department will contribute to the professional development of the PI with mentoring and whatever is needed to further the PI's efforts to integrate research and education

Letter(s) of Collaboration

- 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."

  - Must NOT recommend or endorse PI or project

- Project Description or Facilities, Equipment, and Other Resources must document the nature of all project collaborations, 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

  - Mentoring of U.S. students at a foreign site, if applicable

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 Officer)

- Programs may or may not prefer to make awards with budget close to the anticipated minimum size (check with your Program Officer)
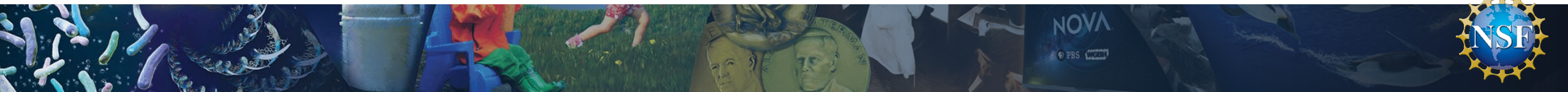
Suggested Proposal Submission Timeline

- 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 20-525 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 Fastlane, Research.gov, and Grants.gov

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

Suggested Proposal Submission Timeline

10 days	Friday, July 17, 2020	**Submit CAREER proposal through Grants.gov**	Proposals submitted via Grants.gov have to go through additional processing before they are accepted at NSF. For this reason, if submitting via Grants.gov, we recommend allowing extra time to resolve any system errors and avoid high volume delays at the NSF Help Desk if problems arise.
7 days	Monday, July 20, 2020	**Submit CAREER proposal through FastLane or Research.gov**	Aim to submit by this date to allow time to resolve any system errors in advance of the deadline and avoid high volume delays at the NSF Help Desk. Print the file to a PDF and view it online to make sure the correct version was submitted. Corrections are automatically accepted before the deadline.
0 days	Monday, July 27, 2020	**Proposal submission deadline**	Proposals are due by 5 p.m. submitter's local time. Proposals that arrive after the deadline will be returned without review.

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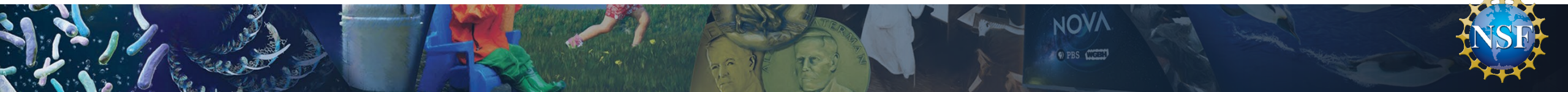
Finding a research home

- Are you proposing scientific research?

- No?
  - Look for support from other sources

- Yes?
  - Your research objective determines the NSF program fit, not the application of your research results.

- Be prepared to answer the question: "What is your research objective?" in 25 words or less to help form your topic area

- Check out the CAREER program contacts page:

https://www.nsf.gov/crssprgm/career/contacts.jsp

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

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
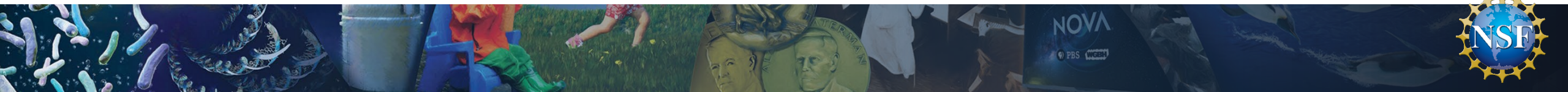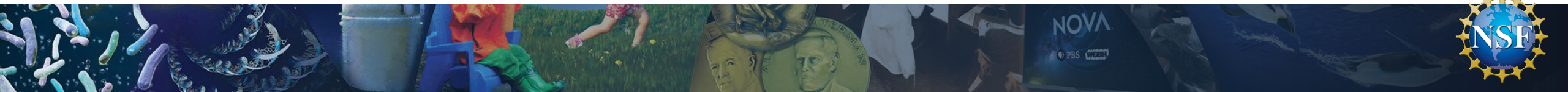
We encourage you to contact Program Directors

- Email the appropriate program officer(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

Questions You Shouldn't Ask a Program Director

- Will you fund my research?

- Is NSF interested in my topic?

- What hypothesis should I use?

- What research topic do you think I should work on?

- What is your program's funding rate?

- If I send a copy of my proposal to you, will you help me edit it?

- This is my last chance, what can I do?

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