The NSF Graduate Research Fellowship Program
NSF Graduate Research Fellowship Program Goals

- To increase the Nation’s human capacity in science and engineering by providing fellowships for early-career graduate students who pursue research-based master’s and doctoral degrees in NSF-supported disciplines.

- To support the development of a diverse and globally engaged US science and engineering workforce.
GRFP Unique Features

• Flexible: choice of project, advisor & program
• Unrestrictive: No service requirement
• Portable: Any accredited U.S. institution
  MS ➔ PhD

• 2,000 Fellowships offered annually, 2010 - 2013
  ~17% success rate
GRFP Successes

- 48,000 Fellowships since 1952
- 40 Nobel Laureates
- 450 members of the National Academy of Sciences
- Founders of corporations to authors of books
- Higher Ph.D. completion rates
- Enhanced diversity
GRFP Key Elements

- Five Year Award – $132,000
- Three years of financial support
  - $32,000 Stipend per year
  - $12,000 Educational allowance to institution per year
- International research opportunity through GROW
- Access to XSEDE cyberinfrastructure resources
• U.S. citizens, nationals, and permanent residents
• Early-career students
• Pursuing research-based MS or PhD in NSF fields
• Enrolled in accredited U.S. institution by fall 2015

• Applicants must **self-certify in the application** that they meet the GRFP Eligibility criteria
GRFP Supported Disciplines

- Chemistry
- Computer and Information Science and Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
- Social Sciences
- Science, Technology, Engineering and Mathematics Education (research-focused)
Not Supported by NSF GRFP

- Business administration or management
- Social work
- Medical, dental, law, or public health programs
- Joint science-professional degree programs, e.g., MD/PhD, JD/PhD, etc.
- Education (except research-focused STEM Education programs)
- See Solicitation (www.nsfgrfp.org)
• **Application**: Available online August

• **Deadlines**: early November (varies by field)

• **Awards**: Announced late March to early April

• **Best Time to Start Preparing**: Now
Complete Application

NSF FastLane

- Personal, Relevant Background and Future Goals Statement (3 pages)
- Graduate Research Statement (2 pages)
- Transcripts, uploaded into FastLane
- Three letters of reference required
- Additional information required for some candidates
  See Solicitation for eligibility requirements (available on www.nsfgrfp.org)
NSF GRFP Website (nsf.gov/grfp)

- Solicitation
- FAQ and Guide links

Fastlane.nsf.gov/grfp

- Online application, user guides, official announcements

Phone and email

- 866-NSF-GRFP (673-4737)
  info@nsfgradfellows.org
Resources at nsfgrfp.org

- Tips for applying
- Frequently asked questions (FAQ)
- Find GRFP contacts
- Important links for the GRFP
- Panelist registration
Two National Science Board-approved Review Criteria:

- **Intellectual Merit**: this criterion encompasses the potential to advance knowledge

- **Broader Impacts**: this criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes
The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   A. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   B. Benefit society or advance desired societal outcomes (Broader Impacts)?
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 organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?
Intellectual Merit and Broader Impacts Assessment

- Personal, Relevant Background and Future Goals Statement
- Graduate Research Statement
- Reference Letters
- Transcripts
Panelists may consider the following with respect to the **Intellectual Merit** Criterion:

- the potential of the applicant to advance knowledge based on the totality of the content in the application, including the strength of the academic record, the proposed plan of research, the description of previous research experience or publication/presentations, and references
Panelists may consider the following with respect to the **Broader Impacts** Criterion:

- the potential for future broader impacts as indicated by personal, professional, and educational experiences
# Personal, Relevant Background and Future Goals Statement (3 pages)

- **How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society?**

  - Describe your personal, educational and/or professional experiences that motivate your decision to pursue advanced study in science, technology, engineering or mathematics (STEM).

  - Include specific examples of any research and/or professional activities in which you have participated.
Personal, Relevant Background and Future Goals Statement (3 pages)

- How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society?
  - Present a concise description of the activities, highlight the results and discuss how these activities have prepared you to seek a graduate degree.
  - Specify your role in the activity including the extent to which you worked independently and/or as part of a team.
  - Describe the contributions of your activity to advancing knowledge in STEM fields as well as the potential for broader societal impacts (See Solicitation, Section VI, for more information about Broader Impacts)
Graduate Research Plan (2 pages)

- Present an original research topic that you would like to pursue in graduate school.
  - Describe the research idea, your general approach, as well as any unique resources that may be needed for accomplishing the research goal (i.e., access to national facilities or collections, collaborations, overseas work, etc.) You may choose to include important literature citations.
  - Address the potential of the research to advance knowledge and understanding within science as well as the potential for broader impacts on society. The research discussed must be in a field listed in the Solicitation (Section X, Fields of Study).

National Science Foundation Graduate Research Fellowship Program
Apply at: www.fastlane.nsf.gov/grfp/
### Intellectual merit
What is the evidence you have already demonstrated intellectual merit? [If your GPA isn’t the greatest, then use other things to show your merit]

Show that you will continue to demonstrate intellectual merit. (through a good and reasonable research plan)

### Broader impacts
What broader impacts have you already made? [Doesn’t have to always be in research; include community outreach, etc.]

How are you going to leverage the NSF resources that you receive to generate broader impacts in the future? [technological/scientific and non-technological/scientific. How will you help the NSF meet its goals? What will you do at your school?]
Preventing a competitive application

Reference Letters

- Choose at least three reference writers
- Give them ample time to prepare their letters
- They should know you as a scientist and personally
- Share your application materials and the merit review criteria (good letters address Intellectual Merit and Broader Impacts)
- Track letter submission using FastLane; you must have 3 letters for a complete application
Preparing a competitive application

1. Read the Solicitation carefully
2. Address the two NSF Merit Review Criteria (Intellectual Merit and Broader Impacts) in each Statement
3. Your statements should have a coherence—a single story about what brought you to where you are now, what the funding will mean, where you hope to go in the future
4. Check for spelling and grammatical errors
5. Verify statements and transcripts uploads
Preparing a competitive application

6. You must certify that this is your own original work

7. You must self-certify your eligibility according to the criteria in the Solicitation

8. Make sure you Press “Submit” button

9. Regularly check application status for # of reference letters

10. Make sure you are enrolled in graduate school by Fall 2015
Evaluation of applications

- Panelists are academic and research experts in general discipline, not necessarily in your research topic
- Panelists rate your application using the two Merit Review Criteria, Intellectual Merit and Broader Impacts
- NSF requests panelists to provide constructive comments (applicants receive anonymous copies of the reviews)
- Panels make recommendations to NSF
- NSF awards fellowships and honorable mentions
Besides constructive feedback, the application is great preparation for:

– Graduate school applications
– Other award applications
– Job applications
– Writing publications
– Professional connections

2013
2,000 Awards
12,000 Applications reviewed
~ 17% Success

You are encouraged to apply
University of Washington contacts:

- Current graduate students:
  - Marilyn Gray
    Graduate School
    megray@uw.edu

- Current undergraduate students:
  - Robin Chang
    Undergraduate Academic Affairs
    robinc@uw.edu