Graduate Research Fellowship Program (GRFP)

August 31, 2016

Office of Research Support & Graduate School
# Panel Members

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Research Administration</th>
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<tbody>
<tr>
<td>Dr. Jamon Halvaksz- COLFA, Anthropology</td>
<td>Jennifer Silver- COLFA</td>
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<tr>
<td>Dr. Jason Yaeger- COLFA, Anthropology</td>
<td>Amy Ossola-Philips- COE</td>
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<tr>
<td>Dr. Jill Fleuriet- COLFA, Anthropology</td>
<td>Liana Ryan- COE</td>
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<tr>
<td>Dr. Michael Cepek- COLFA, Anthropology</td>
<td>Mary Helen Mays- COS</td>
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<td>Dr. Oscar Chavez- COS, Math</td>
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Program Goals

• To select, recognize, and financially support individuals who have demonstrated the potential to be high achieving scientists and engineers, early in their careers.

• To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities and veterans.
GRFP Key Elements

- Three years of support
  - $34,000 Stipend (per year)
  - $12,000 Educational Allowance (to institution)
  - Five Year Award - $138,000

- Professional Development Opportunities
  - Graduate Research Opportunities Worldwide (GROW)
    - International collaborators
  - Graduate Research Internship Program (GRIP)
    - Federal facilities and national laboratories
Solicitation NSF 16-588

- Program Description
- Award Information
- Eligibility Requirements
- Application Preparation
- Submission Instructions
- Application Review Criteria
# Fields of Study/ Deadlines

<table>
<thead>
<tr>
<th>Fields of Study</th>
<th>2017 Deadlines</th>
<th>2018 Deadlines</th>
<th>2019 Deadlines</th>
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<tbody>
<tr>
<td>Life Sciences, Geosciences</td>
<td>October 24</td>
<td>October 23</td>
<td>October 22</td>
</tr>
<tr>
<td>Computer and Information Science and Engineering, Engineering, Materials Research</td>
<td>October 25</td>
<td>October 24</td>
<td>October 23</td>
</tr>
<tr>
<td>Psychology, Social Sciences, STEM Education and Learning</td>
<td>October 27</td>
<td>October 26</td>
<td>October 25</td>
</tr>
<tr>
<td>Chemistry, Mathematical Sciences, Physics and Astronomy</td>
<td>October 28</td>
<td>October 27</td>
<td>October 26</td>
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<tr>
<th>Reference Letter Submission</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td></td>
<td>November 3</td>
<td>November 2</td>
<td>November 1</td>
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</table>
GRFP Eligibility

• U.S. citizens and permanent residents
• Early-career: undergrad & grad students
• Pursuing research-based MS and PhD
• Science and Engineering
• Enrolled in accredited institution in US by Fall

Academic Levels
• **1:** Seniors/baccalaureates; no graduate study
• **2:** First-year graduate students
• **3:** Second-year grad students
  • ≤ 12 months of graduate study by August
• **4:** >12 months graduate study
  • Interruption in graduate study of 2+ years (can have MS degree)
GRFP Fields of Study

- Chemistry
- Computer & Information
- Science/Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
- Social Sciences
- STEM Education
• Joint science-professional degree programs
  • e.g. MD/PhD, JD/PhD
• Business administration or management
• Counseling, Social work
• Education (except in science and engineering education)
• History (except in history of science)
• Research with disease-related goals
• Clinical study
  o patient-oriented research
  o epidemiological and behavioral studies
  o outcomes research
  o health services research
1) **Personal**, Relevant Background and Future Goals **Statement** (3 pages)

2) Graduate **Research Plan Statement** (2 pages)

3) **Transcripts** (uploaded electronically)

4) **Three letters of reference**  (received by 5:00pm EST, November 3, 2016)

*Please see Solicitation NSF 16-588 for application details and requirements.*
Preparing a GRFP Application

Personal Statement

Demonstrate potential for STEM research

• Experiences, personal and professional, that contributed to your motivation to pursue a STEM career and your preparation for it.

• Previous research/industrial/professional experiences

  What was the project?
  What was your part of the project?
  Where was this research done?
  Why was this project worth doing?
  How did your part of the project fit into the whole?
  What have you learned?
  Advanced course work

• Career aspirations and goals

  How have your experiences shaped your goals?
Preparing a GRFP Application

Research Statement
Describe your Research Plan
• Demonstrate understanding of research plan and methodology
• Communicate research idea and approach

Address NSF’s review criteria
Reference Letters

Three reference letters are required

- Applicant can upload contact information of up to 5 reference letter writers
- Select reference letter writers carefully (familiarity with you as a person is important)

As a reference letter writer keep in mind:

- **Intellectual Merit and Broader Impacts** (give specific examples)
Two National Science Board-approved review criteria:

- Intellectual Merit

- Broader Impacts

NSB is the governing board of the National Science Foundation & policy advisors to the president and congress
How important is the proposed activity to advancing knowledge within its own field or across different fields?

AND

- How well does the proposed activity benefit society or advance desired societal outcomes?

* Separate sections for Intellectual Merit and Broader Impacts
Demonstrated intellectual ability and other accepted requisites for scholarly scientific study, such as the ability to:

- Plan and conduct research
- Work as a member of a team as well as independently
- Interpret and communicate research
Societal benefits include, but not limited to:

- Impact of project or individual student on society
- Increased participation of underrepresented groups, women/minority, students with disabilities, veterans
- Improved STEM education in schools and teacher development
- Impact on society: Increased public scientific literacy; increased public engagement with science and technology
- Community outreach: science clubs, radio, TV, newspaper
- Potential to impact diverse, globally competitive workforce
- Increased partnerships between academia, industry and others
- Leadership potential
Assessment

Intellectual Merit
• Academic performance; grades, curricula, awards, etc.
• Graduate Research plan
• Research/professional experience
• Reference Letters

Broader Impacts
• Prior accomplishments and future plans
• Individual experiences
• Potential benefit(s) to society
• Community outreach
• Reference letters
Application Review Process

• Applications are reviewed by panels of disciplinary and interdisciplinary scientists and engineers.

• Applications assigned to panels based on the applicant’s chosen Primary Field(s) of Study and the discipline(s) represented.

• Applicants are advised to select the Primary Field of Study that is most closely aligned with the proposed graduate program of study.

• Holistic evaluation.
Holistic review is a flexible, individualized way of assessing an applicant’s interests and competencies by which balanced consideration is given to experiences, attributes, and academic achievements and, when considered in combination, how the applicant has demonstrated potential for significant achievements in science and engineering.
### Holistic Review in GRFP

<table>
<thead>
<tr>
<th>Application Component</th>
<th>Intellectual Merit</th>
<th>Broader Impacts</th>
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</thead>
<tbody>
<tr>
<td>Personal Statement</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research Statement</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Transcripts</td>
<td>Yes</td>
<td>No</td>
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<td>Reference Letters</td>
<td>Yes</td>
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**Overall Rating**

<table>
<thead>
<tr>
<th>Intellectual Merit</th>
<th>Broader Impacts</th>
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<tbody>
<tr>
<td>E/VG/G/F/P</td>
<td>E/VG/G/F/P</td>
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**Rating Key**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>E</td>
<td>Excellent</td>
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<tr>
<td>VG</td>
<td>Very Good</td>
</tr>
<tr>
<td>G</td>
<td>Good</td>
</tr>
<tr>
<td>F</td>
<td>Fair</td>
</tr>
<tr>
<td>P</td>
<td>Poor</td>
</tr>
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</table>

Applicant receives **Ratings** and **Comments** for both Intellectual Merit and Broader Impacts.
What Reviewers Note

Samples of GRFP applications with “EXCELLENT” rating for

a) Intellectual Merit (IM),
b) Broader Impacts (BI)

Visualization as World Cloud

(Word clouds give greater prominence to words that appear more frequently in the source text.)
Before Applicants Begin, they should ask themselves...

1. What's special, unique, distinctive, and/or impressive about you or your life story?
2. What details of your life might help the reviewers better understand you or set you apart from other applicants?
3. When did you become interested in this field, and what have you learned about it (and about yourself) that has convinced you that you are well suited to this field?
4. How have you learned about this field—through classes, readings, seminars, work or other experiences, or conversations with people already in the field?
5. What reasons can you give for the reviewers to be interested in you?
Advice for Applicants

• Start early
• Read Solicitation, and read it again
• Read NSF GRFP websites
• Select and confirm reference letter writers
• Pay attention to Merit Review criteria
• Identify several colleagues and have them comment on multiple statement drafts
• Share your application materials and the merit review criteria with reference writers
• Monitor receipt of reference letters (3 required for review)
Received an award....now what?