Applying to
the NSF Graduate Research Fellowship Program

Joerg Schlatterer

NSF GRFP Program Director

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GRFP Goals

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

- To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities and veterans.

GRFP Key Elements

Five Year Award – $138,000

- Three years of support
  - $34,000 Stipend per year
  - $12,000 Educational allowance to institution
- Professional Development Opportunities:
    GROW: International Research
    GRIP: Internships
- Supercomputer access: XSEDE
- Career Life Balance (family leave)

See GRFP's new 3-year Solicitation, **NSF 16-588**.

Graduate Research Fellowship Program (GRFP)

PROGRAM SOLICITATION
NSF 16-588

REPLACES DOCUMENT(S):
NSF 15-597

National Science Foundation

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources
   Division of Graduate Education

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

Office of Integrative Activities

Office of International Science and Engineering

Application Deadline(s) (received by 5 p.m. local time of applicant's mailing address):

October 24, 2016
   Life Sciences, Geosciences

October 25, 2016
   Computer and Information Science and Engineering, Engineering, Materials Research

October 27, 2016
   Psychology, Social Sciences, STEM Education and Learning

October 28, 2016
   Chemistry, Mathematical Sciences, Physics and Astronomy

GRFP Unique Features

- **Fellowship**: Awarded to individual
- **Flexible:** choice of project, advisor & program
- **Unrestrictive:** No service requirement
- **Portable:** Can be used at any accredited U.S. institution
    - MS, MS and PhD, PhD

- **2010 - 2016:** 2,000 Fellowships each year
    - 2016: ~16,800 Applications - ~12 % success rate

GRFP Eligibility

- U.S. citizens, nationals, 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 yet

- **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)

Change to GRFP 2017 Eligibility

Change to eligibility for this year's competition:

- Students already enrolled in graduate school may apply only <u>once</u>, in their 1st or 2nd year
- Those who applied as 1st year graduate students last year (2015) can apply as 2nd year graduate students in 2016
- There are no changes to eligibility for undergraduates, post-baccalaureate, or returning students

RATIONALE:

- Increase success rate for applicants
- Increase diversity of applicant pool and institutions
- Ease workload for applicants, referees, reviewers
- Maximize benefits of receiving the fellowship early

Dear Colleague Letter (NSF 16-50), FAQ (NSF 16-051)

GRFP Fields of Study

- Chemistry
- Computer & Information Science/Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
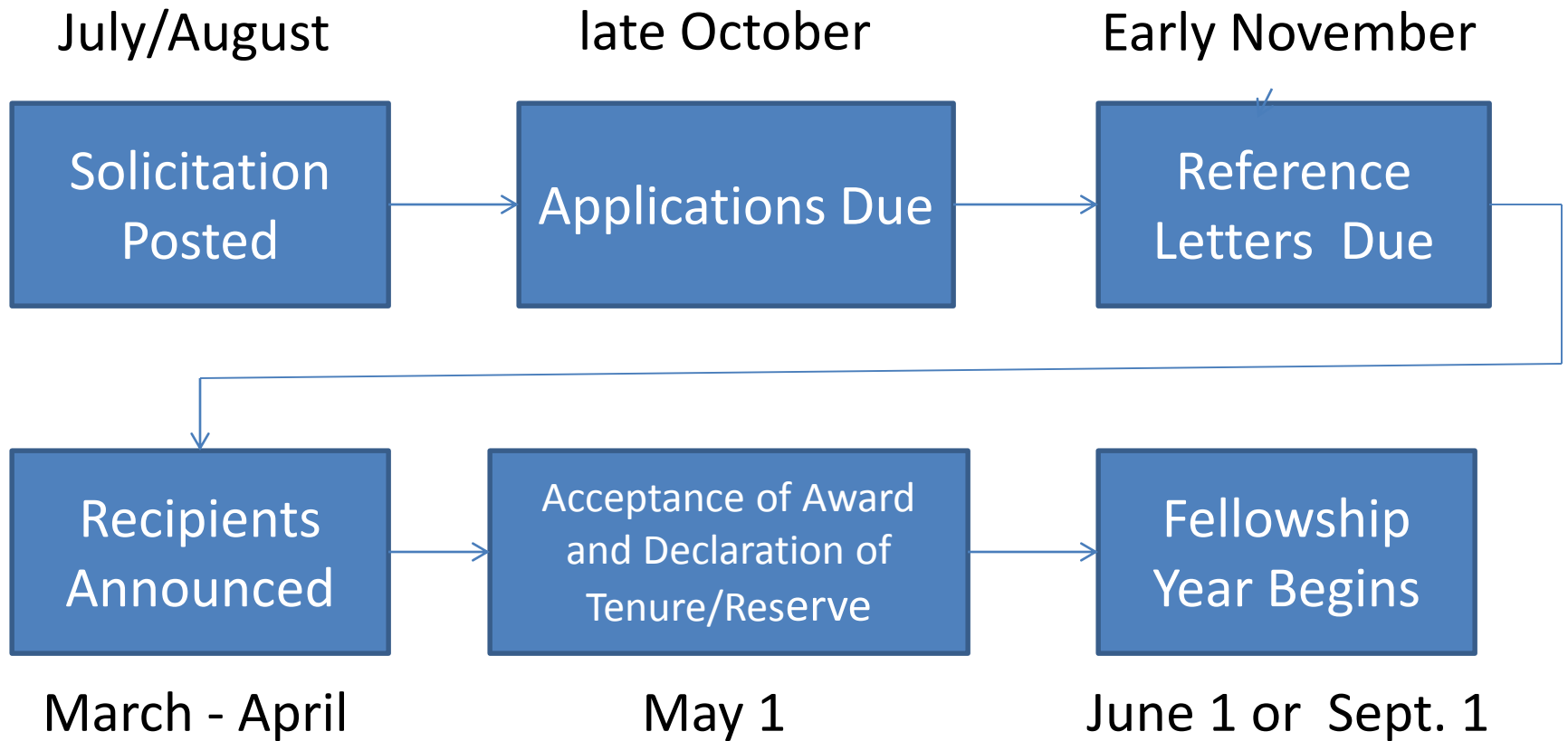- Social Sciences
- STEM Education
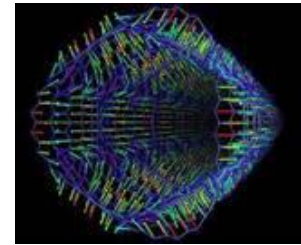
NOT SUPPORTED

- Joint science-professional degree programs
  - e.g. MD/PhD, JD/PhD
- Business administration or management
- Counseling, Social work
- Education (except in STEM education)
- History (except for history of science)
- Research with disease-related goals (unless Biomedical Engr)
- Clinical study
  - patient-oriented research
  - epidemiological and behavioral studies
  - outcomes research
  - health services research

GRFP Application Timeline

July/August	late October	Early November
Solicitation Posted	Applications Due	Reference Letters Due

Recipients Announced	Acceptance of Award and Declaration of Tenure/Reserve	Fellowship Year Begins
March - April	May 1	June 1 or Sept. 1

GRFP Complete Application

Complete Application Package: *Due in late October*

1) Personal Information, Education & Work Experience, Proposed Field of Study, Academic honors, Publications

2) Personal, Relevant Background and Future Goals **Statement** (3 pages)

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

4) Transcripts (uploaded electronically)

5) Three **letters of reference** (received by Nov 3, 2016, 5 pm ET)

Please see new Solicitation for application details and requirements

Preparing a competitive GRFP Application

Personal Statement

Tell your story; demonstrate your potential for STEM research

- Experiences (personal and professional) that contributed to your motivation and preparation for pursuing a STEM career

- Previous research/industrial/professional experiences

  What was the project?
  How did you become involved? Where was it done?
  Why was this project worth doing?
  What was your contribution to the project?
  How did your part of the project fit into the whole?
  What have you learned?
  Any advanced course work?

- Career aspirations and goals

  How have your experiences shaped your goals?

Research Statement

Describe your Research Plan

- Communicate your research idea and approach

- Explain your research plan and methods

- What do you expect to learn? How will you know if the project is successful?

- What would you do next?

Address NSF's review criteria

How have your experiences shaped your goals?

NSF Review Criteria

Two National Science Board-approved review criteria:

- **Intellectual Merit**

  How important is the proposed activity to advancing knowledge within its own field or across different fields?

- **Broader Impacts**

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

Intellectual Merit

Demonstrated intellectual ability and other evidence of potential 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

Broader Impacts

Societal benefits may include, but are not limited to:

- Impact of research or individual student on society
- Increased participation of underrepresented groups, women/ minority, students with disabilities, veterans
- Outreach: Mentoring; improving STEM education in schools
- Impact on society : Increasing public scientific literacy; increasing public engagement with science and technology
- Community outreach: science clubs, radio, TV, newspapers, blogs
- Potential to impact a diverse, globally competitive workforce
- Increasing collaboration between academia, industry, others
- Leadership

Conveying your potential

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 or novel activities

- Reference letters

Application Review Process

- Applications are <u>reviewed by panels</u> of disciplinary and interdisciplinary scientists and engineers.

- Applications <u>assigned to panels based on the applicant's chosen *Primary Field(s) of Study*</u> 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
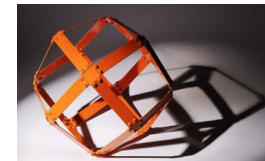
Holistic Review in GRFP

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

Application Component	Intellectual Merit	Broader Impacts
Personal Statement	Yes	Yes
Research Statement	Yes	Yes
Transcripts	Yes	Yes
Reference Letters	Yes	Yes
Overall Rating	**E/V/G/F/P**	**E/V/G/F/P**

Rating Key	
E	Excellent
V	Very Good
G	Good
F	Fair
P	Poor

An applicant receives **Ratings** and **Comments** for both Intellectual Merit and Broader Impacts.

Before beginning your application, ask yourself

- What's special, unique, distinctive, and/or impressive about you or your life story?

- What details of your life might help the reviewers better understand you or set you apart from other applicants?

- How 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?

- How have you learned about this field—through classes, readings, seminars, work or other experiences, or conversations with people already in the field?

- What reasons can you give for the reviewers to be interested in you?

Reference Letters

- 3 reference letters are required for a complete application
- You can list up to 5 reference letter writers (ranked)
    The top 3 will be used
- Select your reference letter writers carefully (familiarity
    with you as a person is important).
    Share your statements with them if you can.

Your <u>reference letter writers</u> should keep in mind:

- **Intellectual Merit <u>and</u> Broader Impacts** (give examples)

- Deadline: Nov 3, 2016, <u>5:00 p.m. Eastern Time</u>

Advice for Applicants

- Start early!

- Read the newest Solicitation, *and read it again.*

- Read NSF GRFP websites.

- Make your list of honors, experiences, presentations, and any publications clear for the reviewers.

- Select and confirm your reference letter writers and monitor receipt of their letters on the GRFP website.

- Pay attention to NSF's merit review criteria.

- Identify several colleagues and have them comment on your statement drafts.

- Share your application materials and the merit review criteria with your reference letter writers.

GRFP Resources

- NSF GRFP Website: www.nsf.gov/grfp
  (Solicitation and links)
- GRFP Website: www.nsfgrfp.org
  (includes tips for applying, FAQs, and resource people)
- To apply on FastLane: www.fastlane.nsf.gov/grfp
- Graduate Research Opportunities Worldwide (GROW): www.nsf.gov/grow
- Graduate Research Internship Program (GRIP): www.nsf.gov/grip
- Phone & e-mail
  - 866-NSF-GRFP (673-4737)
  - info@nsfgrfp.org

Good luck!

STEMUndergrads.science.gov

STEMGradStudents.science.gov

A search portal for both students and universities to discover Federally-sponsored science, technology, engineering, and math (STEM) education training and funding opportunities

STEMUndergrads.science.gov

Undergraduate Program Type ›

- ☐ Undergraduate Fellowship
- ☐ Undergraduate Scholarship
- ☐ Course/Summer School
- ☐ Research Internship
- ☐ Non-research Internship
- ☐ Prize Competitions
- ☐ University/Institution-based Awards for Undergraduate Programs

Undergraduate Level Eligibility ›

STEM Discipline Focus ›

Institutional Location ⌄

Federal Agency Sponsor ›

Geographic Region ›

STEMGradStudents.science.gov

Graduate Program Type ›

- ☑ Graduate Fellowships
- ☐ Graduate Scholarships
- ☐ Graduate Traineeships
- ☐ Research Internships
- ☐ Research Collaborations
- ☐ Scientific Meetings - Conference Presentation/Travel
- ☐ Graduate Thesis Research Awards
- ☐ Supplemental Graduate Research Awards
- ☐ Prize Challenges
- ☐ University/Institutional-based Awards for Graduate Programs

Graduate Level Eligibility ›

STEM Discipline Focus ›

Institutional Location ›

Federal Agency Sponsor ›

Geographic Region ›