Workshop on NSF-GRFP

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The National Science Foundation (NSF) is a United States government agency.

It supports fundamental research and education in all the non-medical fields of science and engineering.

The NSF funds approximately a quarter of all federally supported basic research conducted by the United States’ colleges and universities. In mathematics the NSF is the major source of federal funding (Wikipedia).

Web-page: https://www.nsf.gov/
Total: $6.7 billion (decrease of $841 million from FY 2016).

DMS (Division of Mathematical Sciences): $234 million (decrease of $24 million).

GRFP (Graduate Research Fellowship Program): $247 million (decrease of $86 million).
The National Science Foundation Graduate Research Fellowship Program (NSF-GRFP) is an annual grant that is awarded by NSF to doctoral-level students in the natural, social, and engineering sciences at US institutions.

2,000 new Fellows for 2017 (out of 13,000 applicants). In the future it intends to support 1,000 new Fellows (?).

Benefits: Three-year annual stipend of $34,000 plus $12,000 towards the costs of tuition and fees (paid to the institution).

Web-page: https://www.nsfgrfp.org/ (Video!)
25 fellowships went to applicants from UCLA in 2017 (out of 2069). None of them was in the Mathematical Sciences.

A total of 86 went to Mathematical Sciences.

Three of our graduate students received an honorable mention (total 1740).

It is a realistic goal that the Dept. of Mathematics at UCLA should receive 1–2 fellowships each year.
Why should I apply?

- Last year one out of every 6–7 applications was funded; so the chances are fairly decent.

- Preparing an application is not too much effort. It is also a good learning experience for your professional development.

- Submitting an application helps mathematics as a field and benefits the department.
How do I apply?

- Eligible: US citizens and permanent residents. One application only. First or second-year graduate students (max. of 12 months in grad. school by August 1, 2017).

- Deadline for Mathematical Sciences: Friday, October 27, 2017, 5pm local time. Awards announced the following April.

- Application has to be submitted through FastLane (internet based system of NSF; registration required).
Four application components

1. Academic transcripts.
2. Personal Statement (max. 3 pages).
3. Graduate Research Plan Statement (max. two pages including references).
4. Three letters of recommendation (max. 2 pages).
Important

Both statements have to explicitly address NSF’s “Merit Review Criteria”: Intellectual Merit and Broader Impacts.

- Intellectual Merit: the potential to advance knowledge.
- Broader Impacts: potential to benefit to society.
Personal, Relevant Background and Future Goals Statement (max. 3 pages):

- Outline your educational and professional development plans and career goals.
- How will graduate school prepare 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 studies in mathematics. Include specific examples of activities.

A good starting point: Update and modify personal statement from your grad. school application.
Graduate Research Plan Statement

Max. 2 pages.

- Present an original research topic that you would like to pursue in graduate school.
- Describe the research idea and your general approach.
- Include important literature citations.
- Address the potential for broader impacts.

A good starting point: REU and other research projects, summer workshops, a graduate course in an interesting area.

This is not read by experts in the area; so keep it simple!
Suggestions:

- For first-year students: Two letters from your undergraduate institution and one from UCLA(?).

- For second-year students: two or three from UCLA and maybe one from your undergraduate institution(?).