Applying for Graduate Research Fellowships

Celia M. Elliott
Department of Physics
University of Illinois
cmelliot@illinois.edu

Various Federal agencies support graduate research in physics*

- National Science Foundation
- DOE Office of Science
- National Defense Science & Engineering
- National Institutes of Health
- DOE National Nuclear Security Admin
- National Institute of Standards & Technology
- DOE Computational Science

*Most federal programs support only US citizens, nationals, or permanent residents

URLs for various fellowship application instructions and information:

NSF: http://www.nsfgrfp.org/how_to_apply

DOE Office of Science: http://scgf.orau.gov/overview.html—***but no fellowship program has been announced for this year***

National Defense Science & Engineering Graduate Fellowship http://ndseg.asee.org/application_instructions

NIH Traineeships: http://grants.nih.gov/training/nrsa.htm

DOE National Nuclear Security Administration Stewardship Science Graduate Fellowship Program (high-energy density physics, nuclear science, or properties of materials under extreme conditions) http://www.krellinst.org/ssgf/

NIST: http://www.nistfellows.umd.edu/announcements.html#grad AND http://www.colorado.edu/nistfellows/

DOE-CSGR: https://www.krellinst.org/doecsgf/application/

N.B. Almost all graduate research fellowships sponsored by the U.S. government require that applicants be U.S. citizens, nationals, or permanent residents. A "national" is someone who was born in one of the U.S. territories, e.g., Puerto Rico, the U.S. Virgin Islands, Guam, and American Samoa. A "permanent resident" is someone who has been issued a USCIS Form I-551, giving him or her the right to live and work in the United States on a permanent basis. If you hold an F-1 visa, you are not a "permanent resident," even if you live in the U.S. year-round.

AAUW: https://www.grad.illinois.edu/fellowship/listing/2641 (for international women)

GEM: http://www.gemfellowship.org/gem-fellowship (for U.S. citizens PLUS underrepresented)

Woods Hole (geophysical fluid dynamics): http://www.whoi.edu/page.do?pid=7941

Hertz Foundation: http://www.hertzfoundation.org/dx/fellowships/faqs.aspx

Ford Foundation: http://sites.nationalacademies.org/PGA/FordFellowships/PGA_047958

National Physical Science Consortium: http://www.npsc.org/Applicants/Applicants/fellowshipinfo.html

N.B. Intel fellowships are restricted to students within 18 months of graduation. Applicants must be nominated by their departments. See https://www.grad.illinois.edu/fellowship/listing/3178

N.B. Xerox fellowships are restricted to minority U.S. citizens or permanent residents.

http://www.xeroxstudentcareers.com/why-xerox/scholarship.aspx

AAUW: https://www.grad.illinois.edu/fellowship/listing/2641 (for internationals)

HHMI: https://www.grad.illinois.edu/fellowship/listing/3305 (Students ***must be*** nominated by the University; self-nominations are not accepted. Students in the physical and mathematical sciences, as well as the biomedical sciences, are eligible.)

The rules are different for every major fellowship. Read the eligibility instructions carefully. Most programs have a FAQ that address specific eligibility questions. If you cannot find the answer to your questions in the online materials, *contact the organization—**early***.

For the NSF Graduate Research Fellowship, the "broader impacts" criterion is critical.

Funding decisions are made on the margins in highly competitive programs. Assume every agency will have two to three times more scientifically meritorious proposals than they can fund. If the science is equal, the decisions are made on the basis of other parts of the proposal—the parts you may think are not very important or worth spending time on. They are!

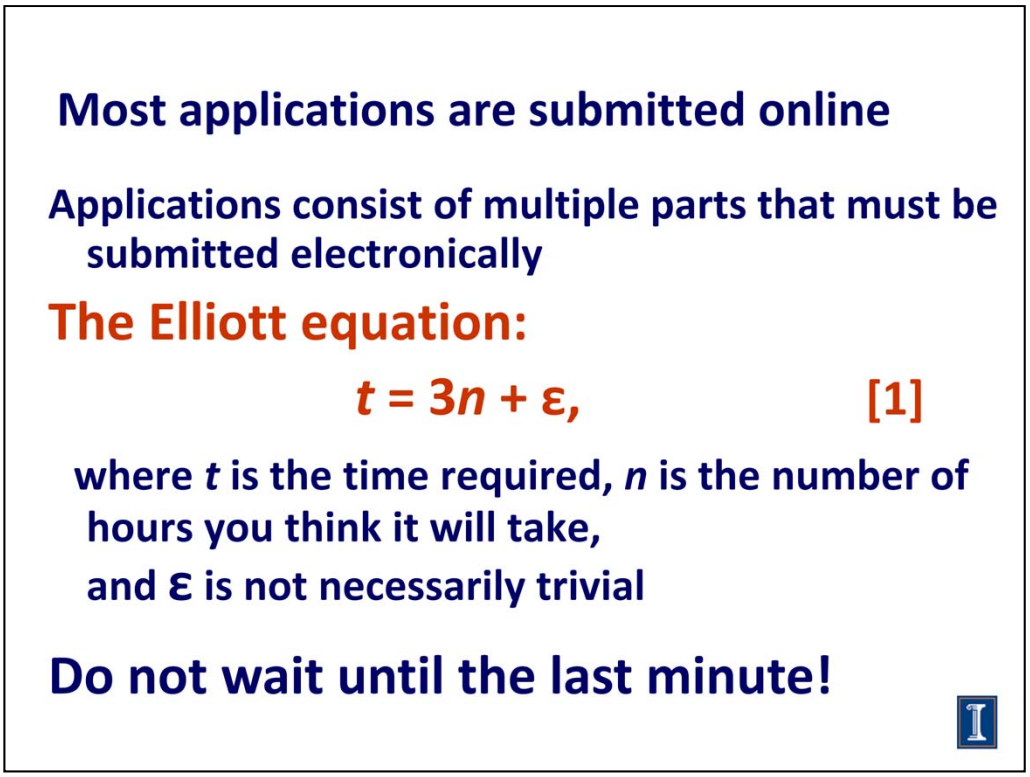
Your objective in applying for a fellowship is to convince a funder that the ~$150k they're going to invest in you will be money well spent.

You have the requisite skills, experience, and desire to succeed.

You are excited about research and understand that it is different from taking classes.

You are versatile and creative.

You have the discipline to persist when the going gets tough.



Some of the interfaces are not very user friendly and can become unstable under heavy loads (i.e., right before the deadline, when the other 1500 applicants are trying frantically to upload their applications, too).

Some require pre-registration before you can begin an application.

Some require you to complete everything in one session.

Get familiar with the submission portal well before the deadline.

Applications often require submission of multiple parts

- "Personal profile" (form)
- Education and work experience (form)
- Planned graduate program (form)
- Personal statement (2 pp.)
- Previous research experience (2 pp.)
- Proposed plan of research (2 pp.)
  - Description of research topics you plan to pursue
  - How you became interested in these topics
- Letters of reference (three)
- Transcripts or GRE scores

The parts shown here are required for the National Science Foundation Fellowships. Most other graduate fellowship applications have some subset of these requirements.

Be sure to ask for your letters of reference ***early***, and give your recommenders the information they need to write a strong letter for you. Send them copies of your personal statement and proposed plan of research so they can make their letters explicit and on point. (Ask them for their feedback on how to improve the statements, too!) Tell them how and where to submit the letter and what the deadline is. Send them a gentle reminder the week before the letter is due.

Some programs have not posted their 2011/12 calls for applications as of August 21, including NSF. Keep checking their websites for the announcements.