

A Guide to Applying for Fellowships

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First, *apply*. Advice is useless unless you actually go through the effort to apply. If you don't, you have a near perfect chance of not getting one. There are many reasons you can invent for not applying; most of these are bogus.

1. *Poor undergrad record*

Ah, did you buy/extort/mooch your way through undergrad? Well, now it's time to make amends. If you work hard in grad school, you can put your checkered past behind you. If you're here, you probably didn't do that badly. If your application looked good enough to an admissions committee, your fellowship application will look equally palatable to a fellowship review committee.

Low self-appraisal is the worst reason to avoid applying. If you don't value your own work, no one else will. And you should value it: you're in Cornell's grad school!

Also, don't underestimate the value of extracurriculars, even at this stage in your academic life. If you have done anything somewhat related to your field - outreach, service, policy, management, etc. - you may be able to highlight this to add some shine to a lackluster academic record.

2. *No recommenders*

Antagonized all your undergrad recommenders? Did they write letters only to get rid of you? Ah, so you *did* buy/extort/mooch your way through undergrad! Even so, chances are that there are at least three or four people who know your work and would write you a letter of recommendation, if not vouch for your status as a human being before a judge. It's time to start talking with people in the department, whose letters will matter much more in the short and long run.

3. *no project*

The NSF and other fellowships require you to write a research proposal. I have it on good authority that the purpose of this is to see that

- (1) you are capable of drafting a coherent research plan
- (2) your research fits in with the funding organization's goals
- (3) you are not set on world domination/destruction

Talk with your professors. They are professors because they have interesting research ideas and know how to follow through on them.

4. *No time*

Consider the amount of time spent on a set of fellowship applications. Then

consider the amount of time spent teaching class after class after class... Now consider that while teaching is a valuable experience in itself, that there are no degrees awarded solely for teaching (in this department). Also consider that your advisor may have funding one year, but not the next: RAs are a privilege, not a right! Finally, consider that convincing others to give you money is a useful and important skill that is needed in many jobs, but especially in research.

5. *No clue*

If you have no clue what you want to work on, or who you want to work with... well, that's tough. However, it helps a lot to have a professor in the department who will write a letter of recommendation for you. Also, these professors will have research projects and ideas that are just waiting to be converted to a PhD thesis. If you ask for help and ideas, you will get them. Again, look at a professor's grant applications/telescope proposals. They will provide insight into both interesting research areas and the funding process.

Advice on the Application Process¹

1. Make time

You will need time to assemble letters of recommendation, transcripts, information, and to write your essays. Even if you are organized, efficient, polite, and persistent (especially about rec letters), expect this process to take a long time.

2. Find out what the granting agency is looking for

Every organization has a mission and a goal. It makes sense, then, to tailor your application to fit that goal. This doesn't mean lying; if you promise to do something you're not willing/interested to do, it probably means you won't write a good application, and your reputation will suffer. But certain projects are more likely to get funded than others.

Note: Some NSF fellowship recipients changed the focus of their research while in grad school. Often the fellowship agency, with proper notification and modest explanation, will be flexible enough to continue funding research. In one extreme case, a professor at Harvey Mudd College switched his NSF fellowship from physics to the history of science (with a dissertation on Maxwell and 18th century Scottish Enlightenment).

Many agencies (esp. federal ones) have outreach as a key required component of both graduate fellowships and research grants. If you have limited outreach experience, consider joining some projects in our department (e.g. Ask an Astronomer, Expanding Your Horizons, Focus for Teens, etc.). If you're unfamiliar or uncomfortable with outreach, give it a try. Remember the person(s) who first taught you about stars and space, or took time to teach you cool things about the world? Well, now is your chance to experience the warm fuzzy feeling as you guide young minds toward truth and beauty.

3. Narrow your focus

You will need a specific project, with specific goals and benchmarks. The more vague you are, the more you sound like you are overpromising and don't know what you're talking about. Make sure your project can be completed within a grad student's career, and not contingent on projects that could be scrapped. Think about what can be done with the facilities available to this institution: if you need other telescopes/resources, discuss how you can get them.

4. Write many drafts and use outside readers

Writing drafts will help you narrow your focus and improve the flow of your application. An outside reader (especially your advisor or another student) will help tremendously on both counts. The professors and researchers in this department have years of experience writing proposals. Ultimately, to become competent, independent researchers we must be able to learn not only how to do science, but to fund a research group. Someday, you too may have little grad students coming to you with broken code and distraught faces.

5. Choose your recommenders and prepare them

Choose people who will be able to speak about you as a person. At the very least, make sure that you have not given them significant offense and have displayed minimal competence in their presence.

It's helpful to provide as much information as possible to your recommenders. They will thank you for your organization. Provide deadlines, organization names, your transcript, some biographical info, a resume/CV, and exact directions on submitting the letters. Make sure your e-mail reminders, which may display increasing panic as the deadlines approach, remain polite. Give them plenty of time to figure out whether they like you or not. Thank them for taking time out of their busy schedules to write you a letter. If you promised them a bribe, make sure you remember to deliver on that promise. (See attached document on applications).

6. Remember: the fellowship committee is looking to fund YOU, not a product.

Don't be afraid to show why you are worth supporting. The insecurities and doubts that you may have privately do not need to appear on an application. Your experiences, both professional and personal, have brought you to a position which few could dream of, and fewer still can realize. You're intelligent, resourceful, charismatic, good-natured (and good-looking), and far-sighted. (Well, probably near-sighted with violent astigmatism, but you know what I mean.) You've overcome difficulties, or helped others overcome challenges. You know how to get things done, demonstrate the finest

qualities of a citizen-scientist. And perhaps, most importantly, you are not afraid to be held accountable to the goals and ideals that you set on paper in an application or in your daily life. Whatever you do or do not accomplish is secondary to the investment in your character and ability. And maybe if you write these fine things about yourself, you will find a new confidence - fellowship or not - which is essential to work and life.

Some Perspective

Fellowships are not a referendum on your worth as a person, or even as a researcher/academic. Intelligence alone does not create progress, and intelligence alone will not win you a fellowship. Many intelligent, hardworking, resourceful people receive fellowships; many do not. Heck, merit may not carry the day at all; everyone has slim odds, and sometimes the process can be subject to the unknown motives and moods of the specific recommenders/interviewers. What recommender #2 had for her lunch or the fight recommender #3 had with his kid last night might be just as important as your GRE score. So if you win a fellowship, don't get a big ego about it. If you don't, don't worry about it either. Or better yet, use it to learn and light a fire under your belly. William Shockley, Nobel laureate and solid-state physicist extraordinaire, pushed himself in part because he was rejected from Terman's genius study for insufficiently high IQ.²

Finally, a fellowship is a means to an end. The end is to graduate competent in your field with a piece of paper illustrating your competence, patience, and persistence, excellent contacts and friends, and hopefully some good memories of a simple time before mega-collaborations, committee appointments, and a mortgage take over your life. *Bonna fortuna!*

Additional info:

Harvard GSAS publication *Scholarly Pursuits: A Practical Guide to Academe*
<http://www.gsas.harvard.edu/financial/scholarly.html>

Cornell fellowships database

<http://www.gradschool.cornell.edu/?p=132>

Getting What You Came For: The Smart Student's Guide to Earning a Master's or PhD

References:

¹ With assistance from

<http://sciencepolicy.colorado.edu/pipermail/envsgrads/2006q2/002773.html>

² http://www.geocities.com/ultrahiq/Terman_Summary.html