

How to Get Funding as a Graduate Student and Beyond

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INSTAAR Graduate
Student Seminar



Why apply for graduate student grants?

- Obvious financial benefits
- Resume builder
- Networking opportunities
- Research freedom



How do you decide to apply?



- Cost-benefit analysis (talk with your advisor)
- Make sure you are eligible (e.g., citizenship, major, year in school)

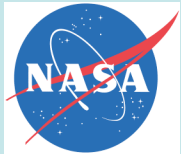


Big Money: Fellowships



National Science Foundation (\$30k/yr + tuition & fees); *November 2006*

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201



NASA

- Earth System Science Fellowship (\$18k/yr + tuition & fees); *February 2007* http://research.hq.nasa.gov/code_y/code_y.cfm
- Graduate Student Research Program (\$24k/yr, includes travel, etc.); *February 2007* <http://fellowships.hq.nasa.gov/gsrp/nav/>
- Harriett G. Jenkins Graduate Fellowship (women & minorities only; \$24k/yr + tuition & fees); *February 2007* <http://216.15.33.202/jenkins/about/?page=main>



Big Money: Fellowships



Department of Defense: National Defense Science and Engineering Graduate Fellowship (~\$30k/yr + tuition & fees); *January 8, 2007* <http://www.asee.org/ndseg/>



Department of Energy: Graduate Research Environmental Fellowships (\$19.2k/yr + tuition and fees); *February 5, 2007* <http://www.atmos.anl.gov/GCEP/>



Canon National Parks Service Science Scholars Program (\$80k total); *May 2007* <http://www.nature.nps.gov/canonscholarships/>



EPA Science to Achieve Results (STAR) Fellowships for Graduate Environmental Study (\$37k/yr); *November 28, 2006* http://es.epa.gov/ncer/rfa/2007/2007_star_fellow.html



Medium Money: Annual Grants



THE GEOLOGICAL SOCIETY
OF AMERICA

Graduate Student Research Grant (~\$2k); *February 1, 2007*



Colorado Scientific Society

Research Grant (\$500–\$1.2k); *April 2007*

Colorado
University of Colorado at Boulder

Beverly Sears Research Grant (\$100–\$1k); *January 19, 2007*



Academic Fellowships (\$600–\$2k); *April 2007*

 **AGU**

AGU Horton Hydrology Fellowship (\$10k); *April 2007*



Medium Money: Annual Grants



AAPG Grants-in-Aid (\$500-2k); *January 31, 2007*

<http://foundation.aapg.org/gia/>

AGI AMERICAN GEOLOGICAL INSTITUTE

AGI Minority Participation Program Scholarships (\$500-3k);

March 2007 <http://www.agiweb.org/mpp/>



National Science Foundation
WHERE DISCOVERIES BEGIN

NSF East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI) (\$4k stipend + airfare); *December 12, 2006*

<http://www.nsf.gov/pubs/2006/nsf06602/nsf06602.htm>

NSF Developing Global Scientists & Engineers (international travel & dissertation support); *February 15, 2007*

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12831&from=fund



Small Money & Non-Monetary Support

- Departmental travel grants
- Conference-specific travel grants (GSA, AGU)
- CU Graduate School Student Travel Grant (\$200-\$300)
- UGGS Travel Grant
- Mentorship programs for undergraduate assistance (departmental, UROP)



If you don't know about it,
you can't apply for it



<http://www.cos.com/>

>Funding Opportunities

“The most comprehensive source of funding information available on the Web, with more than 22,000 records, representing over 400,000 funding opportunities, worth over \$33 billion.”



What do you need to apply?

- Application
- Research proposal
- Resume/research experience
- Letters of recommendation
- GRE scores/transcripts
- And sometimes, a budget



What's in a research proposal?

- A logical, coherent plan of research
- Make it interesting
- Make it honest
- Show that your work is important
- Sufficient, relevant background
- Make it feasible



Dissertation Fellowships

- One year fellowships
- Must be in last year of PhD
- Most of your research must be completed
- Typically, only cover your support and some publishing costs
- Ford Foundation (\$21k); *Nov. 30, 2006*
- American Association of University Women (AAUW) (\$20k); *Nov. 15, 2006*



So...you've graduated...



What's next?





Post Grad Funding at NSF

- CAREER grants for pre-tenure faculty
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5262
- REU for undergraduates in the field
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517&from=fund
- RUI – supplement for researcher at a college that is primarily undergraduate
- SGER – small exploratory grants



Tips for getting NSF research grants

- Talk to your program manager!
- Read the grant proposal guide and solicitation!
- Do mail reviews for NSF program managers
- Volunteer to be on a review panel
 - You will see how proposals are reviewed and decided upon
- Suggest reviewers in your proposal
 - Keep in mind conflicts of interest
 - “No, your thesis advisor cannot be a reviewer.”



Tips for getting NSF grants

- Plan field logistics carefully
 - Is your plan realistic/feasible?
 - You will scare the program manager if you ask, “What are the exact dimensions of the inside of the HC130 cargo planes?”
- Be fully aware of available resources
 - If someone else can cost-effectively analyze your samples for you and better than you, use their expertise
- State ultimate importance right away
 - Will this be on the cover of Nature? JGR? Journal Glaciology?



Pitfalls to avoid

- Not addressing reviewer comments when resubmitting a proposal
- Not knowing the difference between intellectual merit and broader impacts
 - For ice sheet mass balance research, constraining sea level rise is intellectual merit, NOT a broader impact
- Failure to cite relevant literature
- Reporting on more than one of your past relevant grants



Letters with proposals

- Letters of support are **NOT** allowed
 - No warm and fuzzy letters saying how great your idea is and how smart you are
- Letters of collaboration are encouraged
 - If you are going to send your samples to Jim White's lab, a letter from him would be good



Examples of NSF Broader Impacts

- Promote teaching, training, learning
- Broaden participation of underrepresented groups
- Enhance infrastructure for research & education
 - Facilities, networks, partnerships
- Disseminate results broadly
- What are the benefits to society?



General Thoughts

- Start early and reread your drafts many times
- Have an advisor read it at least once
- Try for everything
 - Sadly, the odds are against you so applying for more than one will improve your chances
 - You never know who will like your idea, so apply to many agencies and types of grants
- Make sure you follow directions
 - Each application is slightly different
- Start early

