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

Funding as a Graduate Student & Beyond
Medium Money: Annual Grants

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

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

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

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

**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 Minority Participation Program Scholarships ($500-3k); March 2007
http://www.agiweb.org/mpp/

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

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

- REU for undergraduates in the field

- 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