

Financially Supporting your Graduate Education

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Let's start with a few questions.

- ① MS or PhD student?
- ② Are you happy with your current funding situation?
- ③ If not, then what would be your ideal funding scenario?



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Everyone requires financial support.

Graduate Students (YOU) need financial support.

- Living expenses
- Travel
- Equipment



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Professors require financial support

- Personnel (Undergrads, Grads, Postdocs)
- Travel
- Equipment
- Living Expenses (e.g., summer salary)



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Industry also require funding

- raise funds to support innovation
 - creation can be expensive without guarantee of return-on-investment



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Financial support is the freedom to pursue your personal goals

- Embrace the challenge!
- Embrace the opportunity!



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Types of graduate funding

Traditional funding

- Teaching assistantship (TA)
- Research assistantship (RA)
- Fellowships and scholarships



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Alternative funding

- On or off campus jobs
- Travel grants
- Educational loans
- Friends and relatives
- Personal savings
- Inheritance/Lottery



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Funding: Long and short term

- Masters (short road)
 - 1 – 2.5 years
 - Harder to obtain funding since many funding opportunities are for PhD students.
 - Be creative and persistent.
- PhD (loooonnnngggger road)
 - 4 – 7 years
 - May have different types of funding during different phases.
 - Can be stressful if funding source is uncertain from year to year or semester to semester.



Teaching assistantship (TA)

- Pros

- Teaching experience
- Best way to learn is to teach
- Practice presentation skills
- Not tied to a research group

- Cons

- Must do research in addition to teaching obligations.
- May be more than a teaching assistant.



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Research assistantship (RA)

- Pros

- Getting paid to do research that hopefully is related to your Masters/PhD degree.

- Cons

- May feel tied to a research group.
- It is OKAY to switch groups and advisors!
But be careful.



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Finding a research assistantship

- Get involved!
- Explore before you commit.
 - How do you feel after you leave his/her office? Inspired? Crappy? Do not ignore these feelings!
- Talk to professors early.
 - Look at their research.
 - Figure out what may interest you.
 - Ask for paper recommendations.
 - Propose ideas.
- Attend research meetings.



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Do I need a “rich” advisor?

- Availability of RA should not be the main reason to join a research group

BUT

- Be realistic regarding an advisor’s ability to support you through the program.



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Finding external funding

- Ask your advisor
 - Fellowships in your area?
 - Fellowships at your university?
- Ask your peers
- Search!
 - Your university website for sources of internal funding
 - Scholarship websites
 - Companies
 - Government agencies



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A small sample of fellowships and scholarships

Name	Years funded	Women Only	Minorities Only	US Citizen only	Deadline
Microsoft	3				Oct
Hertz	5				Oct
IBM	3				Oct
NSF	3			Yes	Nov
NPSC	2-6			Yes	Nov
American Association of University Women	1	Yes			Nov
Google Anita Borg	1	Yes			Jan
AT&T	3	Yes	Yes		Jan
Dept. Homeland Security (DHS)	3			Yes	Jan
NDSEG	3			Yes	Jan
DOE	4			Yes	Jan
SMART	2-3			Yes	Jan
NASA-GSRP	3			Yes	Feb
Women in Defense	1	Yes		Yes	July

Don't be afraid to apply!

- Typical reactions from female students.
 - “I’ll never get awarded this fellowship.”
 - “I’m not qualified.”
- The worst thing that can happen is that you will not get the fellowship.
If that happens, you will survive 😊



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Don't be afraid to apply! (2)

- If you are interested and meet the specified (not imagined) qualifications, then apply.
- Once you have decided to apply, go full steam ahead.
 - Erase all thoughts of not getting the fellowship.
- Be inspired by the opportunity.



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Failure leads to success

I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed.

- Michael Jordan



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Failure leads to success

- Ask your professors ...
 - How many of their grant proposals have been rejected?
 - How many of their conference/journal papers have been rejected?
 - How many of their brilliant ideas didn't pan out?
 - Despite the numerous possibilities for rejection, why do they still love their job?
- One acceptance outweighs a thousand rejections.



Inside a fellowship application

- General form
- Letters of reference
- Transcripts
- Test scores
- Essays
 - Personal history / personal statement
 - Past work
 - Proposed work



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Preparing essays

- Ask fellow graduate students for examples.
- Steps for good essay
 - Start early.
 - Revise, revise, revise.
 - Be specific and concrete!



Preparing essays (2)

- Catch the reader's attention immediately.
 - Get personal!
 - Your application is not a technical (impersonal) paper.
 - Customize your essay to reflect your uniqueness.
 - No boilerplate information should be in your essay.
- After writing your essays, you should learn something new about yourself.



Getting references

- Don't be afraid to ask.
- Ask early.
- Help your references write a strong letter for you.
 - State clearly the goals of the grant you're applying for
 - Hand over your personal statement and research description.
 - Share your enthusiasm with them.
- Remind your references of application deadlines — many faculty need the nagging!



Obtaining conference funding

- Many conferences have funding for students.
- Look for external funding sources (e.g., travel grants).
- Be a student volunteer.



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Surviving funding lapses

- Be frugal!
- Be flexible.
- Ask around.
- TA in your department or other departments.
- Consider internships.
- Apply for part-time jobs.
- Apply for a loan.
- **Most importantly ... Do not panic!**



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Once you obtain funding

- Celebrate!
- Promptly let the organization/person know your decision to accept or not accept.
- If you accept, you have made a commitment to that organization/person.
- If some life event requires you to change your decision, let the appropriate people know ASAP!
 - It's simple courtesy.
 - The organization can find someone else who needs the funding.



You are amazing! 😊

- There are funding opportunities for EVERY person in this room!
- Be persistent in seeking the funding that best suits your situation.
- Never talk yourself out of an opportunity.
- Never let funding challenges stop you from pursuing your dreams.



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