

# CHTW Presents: Graduate Fellowship Workshop

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# Why should I apply for a graduate fellowship?

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- Get a decent grad student stipend/salary.
  - Build your CV for pre- and post-PhD opportunities.
  - Get some control and freedom over your choice of PhD research.
  - Learn how to write good research proposals and plan research well.
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# The usual suspects

1. National Science Foundation Graduate Research Fellowship Program (NSF GRFP) due Oct. 18-22
2. National Defense Science and Engineering Graduate Fellowship (NDSEG)
3. Department of Energy Computational Science Graduate Fellowship
4. Department of Energy NNSA Stewardship Science Graduate Fellowship
5. Department of Energy NNSA Laboratory Residency Graduate Fellowship
6. Ford Foundation Fellowship
7. GEM Fellowship
8. Hertz Foundation Fellowship (due October)
9. Paul and Daisy Soros Fellowship for New Americans (due Oct-Nov)
10. New Mexico Space Grant

Others: <https://apps.grad.illinois.edu/fellowship-finder/>

# NSF Graduate Research Fellowship Proposal (NSF GRFP)

- Most well-known US graduate fellowship
- 3 years of \$34,000 stipend + \$12,000 tuition payment (usually any remaining tuition is waived by the school)
- Can be put “on reserve” for two years while you TA
- Undergrad seniors can apply
- Grad students can only apply in *either* their first or second year
- Requires a 3-page personal statement and a 2-page research proposal
- Requires 3 letters of recommendation
- Due October 22, 2021 for physics

# National Defense Science and Engineering Graduate Fellowship (NDSEG)

- Fellowship from the Department of Defense, awarded to you by the Army, Air Force, or Navy
- 3 years of \$38,400 stipend + full tuition payment + \$5000 travel allowance
- Can not be put on reserve
- Undergrad seniors can apply
- Grad students can apply as long as they have 3 or more years left in their graduate program
- Requires a 500-word personal statement and a 3-page (4<sup>th</sup> page for references) research proposal
- Requires 3 letters of recommendation
- Requires general GRE scores
- Due early November(?) 2021

# Paul and Daisy Soros Fellowship for New Americans

- Awarded to “new Americans” under 30 who are either the children of immigrants or are immigrants themselves (minimum US residency requirement: graduated from a US high school and college)
- Finalists undergo a round of interviews
- 2 years of \$25,000 stipend + half tuition payment in any advanced degree (including med school, law school, ...)
- Second year of fellowship can be reserved
- Undergrad seniors can apply
- First and second year grad students can apply
- Requires two 1000-word personal essays
- Requires at least 3, but up to 5, letters of recommendation
- Due October 28, 2021

# Hertz Foundation Fellowship

- Prestigious fellowship for STEM PhD students
- Finalists undergo up to two round of rigorous technical interviews
- 5 years of \$34,000 stipend + full tuition payment
- Can be combined with federal fellowships!
- Fellowship cannot be reserved
- Undergrad seniors can apply
- First-year grad students can apply
- Requires open-ended/creative personal statement about extracurricular interests
- Requires at least 4 letters of recommendation
- Due October 29, 2021

# DOE Computational Science Graduate Fellowship (DOE CSGF)

- Fellowship for students interested in any kind of computational science
- 4 years of \$38,000 stipend + full tuition payment + \$1000 yearly travel allowance
- Recipients also get to do a 12-week “practicum” at a national lab, with the option to spend more time (and the stipend is supplemented during the practicum)
- Can not be put on reserve
- Undergrad seniors can apply
- 1st year grad students can apply (incl. those with MS degrees from a different institution)
- Requires several short essays plus a “program of study” proposal to complete 2 graduate level courses each in math, computer science, and natural science
- Requires 3 letters of recommendation
- Due early January(?) 2022



# DOE NNSA Stewardship Science Graduate Fellowship (DOE NNSA SSGF)

- Fellowship for students interested in science and engineering related to the DOE National Nuclear Security Administration (NNSA)
- 4 years of \$36,000 stipend + full tuition payment + \$1000 yearly travel allowance
- Recipients also get to do a 12-week “practicum” at a national lab, with the option to spend more time (and the stipend is supplemented during the practicum)
- Can not be put on reserve
- Undergrad seniors can apply
- 1st and 2nd year grad students can apply (incl. those with MS degrees from a different institution)
- Requires several short essays plus a “program of study” proposal involving physics and engineering courses
- Requires 3 letters of recommendation
- Due early January(?) 2022

# DOE NNSA Laboratory Residency Graduate Fellowship (DOE NNSA LRGF)

- Fellowship for students interested in science and engineering related to the DOE National Nuclear Security Administration (NNSA)
- 4 years of \$36,000 stipend + full tuition payment + \$2000 yearly travel allowance
- Recipients also get to do **two** 12-week “residencies” at a national lab, with the option to spend more time (and the stipend is supplemented during the practicum)
- Can not be put on reserve
- Undergrad seniors *can not* apply
- Grad students in their second or later years of their PhD can apply
- Requires a “Residency plan letter,” a lab mentor, and specific details about your lab residency
- Requires 3 letters of recommendation
- Due mid March(?) 2022

## GEM Fellowship

- Fellowship for students in STEM MS or PhD programs – including US permanent residents
- 1 year of \$16,000 stipend and 5 years of full tuition and fees
- Can not be put on reserve
- Fellows are required to do two paid summer internships at a GEM Employer (such as 3M, Amazon, NASA)
- Undergrad seniors can apply but must apply to 3 "GEM University" members (UNM is a member)
- No grad students, but "gap year" students allowed with same requirement as undergrads
- Requires resume and transcript for initial application
- General GRE optional but "highly recommended"
- Initial application due October 1, 2021

# Ford Foundation Predoctoral Fellowship


- Fellowship for students "committed to a career in teaching and research at the college or university level" – including US permanent residents
- 3 years of \$27,000 stipend
- Can be put on reserve for up to two years after the first year
- Undergrad seniors can apply
- Grad students can apply as long as they have 3 or more years left in their graduate program
- Requires 2-page personal statement, 3-page research summary, and 2-page research/future goals proposal
- GRE scores (general and subject) optional but accepted
- Requires at least 3, but up to 5, letters of recommendation
- Due December 16, 2021
- This foundation also offers **dissertation and postdoctoral fellowships** with similar benefits

# New Mexico Space Grant Graduate Fellowship

- Fellowship for grad students in NM whose research relates to a NASA research area
- 1 year of \$10,000 stipend
- Can be won twice for two years of support
- Can be combined with any fellowship here
- Undergrad seniors can apply
- Grad students can apply
- Requires short essays about the relevance of your research to a NASA research area
- Requires 1 letter of recommendation
- Due Spring 2022

# Typical Components of an Application

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- Letters of Reference
  - Personal Statement
  - Research Plan
  - CV (sometimes a document, sometimes entered into a webform in pieces)
  - Other documents, etc. as listed in solicitation
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# Typical Components of an Application

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- Letters of Reference

These should give a full picture of who you are and what you can do.

Who you should ask:

- Current research advisor if you have one
- Past research advisors/supervisors
- Teachers, particularly if they got to know you
- Established professors/senior scientists if possible
- People who will write nice things about you

When you should ask: ASAP



# Typical Components of an Application

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## - Letters of Reference

Be ready to send a “cheat sheet” to your letter writers if they agree. It should include how they know you, what you did for them/with them/in their class, etc., and any things you particularly hope they will write about.

You need to also send them: your CV, a draft of your other documents if they ask



# Typical Components of an Application

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## - Personal Statement

Read the solicitation carefully. Each solicitation is looking for different things in this part. Watch webinars and attend informational seminars on the specific fellowship, if possible.

# Typical Components of an Application

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## - Research Plan

You should work with a more experienced researcher to make a reasonable and interesting research plan. This can be someone you are already working with or someone whose work you find interesting.

Peer review of research statements is particularly important. Finding the right balance of not-too-technical and not-too-general is very difficult. Peers can tell you when your explanation is not making sense or is not adding to the overall strength of the application.

# Typical Components of an Application

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- CV (sometimes a document, sometimes entered into a webform in pieces)

Making a good CV that highlights your strengths is an art.

Peer review can help a lot here, too.

# Typical objections and worries

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- I already have funding from my PI.
  - I don't know what I want to research in grad school.
  - I don't know if I want to go to grad school.
  - There is very little chance I will be selected due to XXX.
  - I am not a US citizen or permanent resident.
  - I'm over 2 years into my PhD.
  - I'm too early in my undergrad career.
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# Typical objections and worries

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*- I already have funding from my PI.*

Great! You should still apply because:

1. The fellowship will most likely mean more money, but even if not...
2. You will have a little more control, should you want to switch topics or advisors, but even if you don't...
3. Planning and proposing research is an important skill that will pay dividends—it becomes more useful the longer you have it, and...
4. These kinds of fellowships are great for your post-PhD job prospects!

# Typical objections and worries

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*- I don't know what I want to research in grad school.*

That's okay!

Fellowship applications are a great way to explore research you find interesting but aren't ready to commit to. Writing a research plan with a PI you might consider working for gives you a feeling for what working on that project would be like.

(Also, a tip from a professor on admission committees: showing intelligent interest in a research topic or area is very important on grad applications.)

Furthermore, many fellowships will allow you to make small (or big) changes to your research plan after you get it. (NSF GRFP is one.) Check out the solicitation.

# Typical objections and worries

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*- I don't know if I want to go to grad school.*

Understandable!

But if you are considering grad school, you should see if you can get a guaranteed researcher salary at a rate higher than most grad students get.

Also, writing up a research plan and consulting with potential future bosses will give you a good idea of what grad school will be like, and will help you with your decision.

Also, some of the fellowships can also be used for med or law school.

# Typical objections and worries

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- *There is very little chance I will be selected due to XXX. (XXX = something bad or lacking or non-ideal about your record, skills, or history)*

*Everyone* has one of these worries. Trust me.

And while it is true that certain things can make your application more attractive, the final decision will *always* have a bit of randomness, based on the values of the referees, the competing applications, the agencies' priorities, and your zodiac sign (probably).

So you can't be 100% sure that you will get a fellowship, but you can't be 100% sure you won't either.

Except if you don't apply. Then you 100% won't get it.



# Typical objections and worries

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*- I am not a US citizen or permanent resident.*

*- I'm over 2 years into my PhD.*

*- I'm too early in my undergrad career.*

Cool. All you folks go sit together and we'll talk about how to find the rarer opportunities that are available to you.

# What next? (In groups:)

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- What fellowships are you going to apply to?
  - What are the important deadlines?
  - Locate the solicitation and make a plan to read it *thoroughly*.
  - Decide on your letter writers.
  - Decide on your research topic.
  - Make a plan to meet up with your group next week.
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