Applying for Graduate Research Fellowships

Seth Sullivant

North Carolina State University

September 9, 2011
Available Graduate Fellowships

- NSF Graduate Research Fellowship
- Hertz Foundation Fellowship
- DOE Office of Science Graduate Fellowship
- National Defense Science and Engineering Fellowship
- ...

Seth Sullivant
Graduate Research Fellowships
Some General Guidelines for Proposal Writing

Follow Directions!
- Find out what the agency wants to fund, and address your proposal to those aims
- Check off all the boxes
- Follow formatting requirements
- Get all your materials in on time

What Makes Your Application Unique?
- Your application is an advertisement for you
- Make it enjoyable to read—Say it simply

Finish Early—Get Feedback
- Have other grad students, postdocs, or faculty read your proposal
Some General Guidelines for Proposal Writing

Follow Directions!
- Find out what the agency wants to fund, and address your proposal to those aims
- Check off all the boxes
- Follow formatting requirements
- Get all your materials in on time

What Makes Your Application Unique?
- Your application is an advertisement for you
- Make it enjoyable to read—Say it simply

Finish Early–Get Feedback
- Have other grad students, postdocs, or faculty read your proposal
Follow Directions!
- Find out what the agency wants to fund, and address your proposal to those aims
- Check off all the boxes
- Follow formatting requirements
- Get all your materials in on time

What Makes Your Application Unique?
- Your application is an advertisement for you
- Make it enjoyable to read—Say it simply

Finish Early—Get Feedback
- Have other grad students, postdocs, or faculty read your proposal
Some General Guidelines for Proposal Writing

Follow Directions!
- Find out what the agency wants to fund, and address your proposal to those aims
- Check off all the boxes
- Follow formatting requirements
- Get all your materials in on time

What Makes Your Application Unique?
- Your application is an advertisement for you
- Make it enjoyable to read—Say it simply

Finish Early—Get Feedback
- Have other grad students, postdocs, or faculty read your proposal
Basic Information about the Fellowship
- 3 years of research funding (salary) $30,000 per year
- 3 years of tuition offset
- Access to super-computing facilities
- Fellowship Website: www.nsfgrfp.org

Who is Eligible?
- U.S. Citizens, Nationals, and Permanent Residents
- Graduating Seniors
- Graduate students who have completed no more than 12 months of graduate study at time of application (one academic year = 9 months)

Why Apply?
- More Time for Research
- Looks Good on the Resume: Research Positions in Academia, Industry, Education
- Good Practice

Deadline: Early November
What You Need to Submit

- Basic Personal Information
- Transcripts
- 3 Letters of Recommendation
- Essays
  - Personal Statement
  - Previous Research Experience
  - Proposed Plan of Research
- Choice of Research Institution
Choose letter writers who know you
Give your letter writers lots of warning (1 month at least)
Show your letter writers your application materials
Try to choose one or more people from NCSU
  - If undergrad applying elsewhere, letter writer from that university is helpful.
Any letter writer who can comment on past research experience is a plus.
I have an intended research mentor/ am working on a project already.
  - Write about your project!
  - What is novel/new? Why is it important?

I’m not sure what I want to work on yet.
  - Identify a research area that interests you
  - Write about problem(s) in that area that seem interesting to you

Be ambitious but realistic

Research your subject area and write correctly about it

Make sure your research project is appropriate for your intended institution
I have an intended research mentor/ am working on a project already.

- Write about your project!
- What is novel/new? Why is it important?

I’m not sure what I want to work on yet.

- Identify a research area that interests you
- Write about problem(s) in that area that seem interesting to you

Be ambitious but realistic

- Research your subject area and write correctly about it

Make sure your research project is appropriate for your intended institution
I have an intended research mentor/am working on a project already.
  - Write about your project!
  - What is novel/new? Why is it important?
I’m not sure what I want to work on yet.
  - Identify a research area that interests you
  - Write about problem(s) in that area that seem interesting to you
Be ambitious but realistic
Research your subject area and write correctly about it
Make sure your research project is appropriate for your intended institution
Essay: Previous Research Experiences

- Discuss any past research experiences
- Show how these experiences demonstrate your initiative/creative thinking
- Link previous research experiences to proposed plan of research

I don’t have any past research experience!
Discuss any past research experiences
Show how these experiences demonstrate your initiative/creative thinking
Link previous research experiences to proposed plan of research
I don’t have any past research experience!
What Counts As Previous Research Experience?

- REU, REG experiences
- Senior Thesis
- Final Project in Course
- Attending Research Seminars
- Keeping up with Research Trends in Mathematics
- If you don’t have formal research experience, talk about something that shows your initiative.
- Don’t leave this blank!
Why are you fascinated by your research area?
What examples of leadership skills and unique characteristics do you bring to your chosen field?
What personal and individual strengths do you have that make you a qualified applicant?
How will receiving the fellowship contribute to your career goals?
How do these activities address the Intellectual Merit and Broader Impacts criteria?
Some General Advice for the Essays

- Integrate essays to create singular theme, link the content together
- Display your passion and motivation in the essays
- Mention what sets you apart from a typical applicant - be unique!
- Keep essays clear, simple to read, scientifically sound, and professional
- Thoroughly address both Intellectual Merit and Broader Impacts
Review Criterion: Intellectual Merit

- How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)
- To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts?
- How well conceived and organized is the proposed activity?
- Is there sufficient access to resources?
Review Criterion: Broader Impacts

- How well does the activity advance discovery and understanding while promoting teaching, training, and learning?
- How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?
- To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- Will the results be disseminated broadly to enhance scientific and technological understanding?
- What may be the benefits of the proposed activity to society?
Getting a graduate research fellowship can have a huge positive impact on your life
Start working on applying for fellowships now
Choose topics for your essays carefully, and integrate them
Contact your letter writers early, use them to get advice on your essays
NSF Graduate Research Fellowship Website:
http://www.nsfgrfp.org/