

## Applying to graduate fellowships: a discussion with past winners

Harvard SEAS

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## Goals

- Apply ASAP
- What you submit matters
- Offer you resources
- You and panel

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## Agenda

- Overview of what, why, how
- Discussion with the fellows

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## Panel

- Kay Furman *Bioengineering/Medical Engineering*
- Katie Hoffman *Microrobotics*
- John Kolinski *Mechanics*
- Erez Lieberman *Applied Mathematics*
- Haoqi Zhang *Computer Science, Economics*

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## What is a fellowship?

money granted by a university or foundation or other agency for advanced study or research

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## Why apply?

- \$\$\$\$
- Freedom
- Prestige
  
- If you don't, someone else will.

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## Many fellowships out there!

- See handout
- Each has target audience
  - Field of study
  - Citizens and permanent residents, minorities, women
- Tip: many under applied to!
- Deadlines SOON!

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## How to apply?

- Get reference letters
  - usually 3+, usable across fellowships
- Write essays
  - research statements, personal statements, ...
- Send transcripts
- Take GRE and submit scores
  
- Tip: things take time. START EARLY!

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## Some big science fellowships

- National Science Foundation Graduate Research Fellowship Program (NSF)
  - All fields of science and interdisciplinary fields
  - Gives out lots of fellowships (1243/9347 in 2009)
  - Early November Deadline for application, early December for reference letters

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## Some big science fellowships (2)

- National Defense Science and Engineering Graduate Fellowship (NDSEG)
  - All natural sciences but not social sciences
  - Less fellowships, but less applied to (200/3,400 in 2008)
  - Funded by military, but funds science
  - Early January 2010 deadline

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## Some big science fellowships (3)

- The Hertz Foundation Graduate Fellowship (The Hertz)
- Funds applied sciences
- Only 15 fellows a year
- Multi-round interviews
- Deadline: End of this month.

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## How to win

- Tip:
  - Find out what a fellowship is looking for.
  - Address the essay prompt.

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## Case study: NSF

“In considering applications, reviewers will be instructed to address the two Merit Review Criteria as approved by the National Science Board – Intellectual Merit and Broader Impacts. Applicants, therefore, must address each criterion in their written statements to provide reviewers with the information necessary to respond fully to both.”

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## NSF: 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 to conduct the project?
- 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?

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## NSF: Broader Impact

- 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?

Rating sheets missing a required element will be returned to the panelist for completion.

NSF Graduate Research Fellowship Program  
**APPLICANT RATING SHEET**

Applicant: Haoqi Zhang  
 Panel: Computer Science I

**Intellectual Merit Criterion**  
 Demonstrated intellectual ability and other accepted requisites for scholarly scientific study, such as the ability (1) to plan and conduct research; (2) to work as a member of a team as well as independently; and (3) to interpret and communicate research findings.

Overall Assessment of Intellectual Merit:  Excellent  Very Good  Good  Fair  Poor

Mandatory - explain assessment to the applicant:  
*A very committed, intelligent and task oriented individual. Has uniquely applied novel approaches to existing problems. Candidate has tendency to learn as he grows and adapts well to the environment. Has proven to be a team player with excellent credentials.*

**Broader Impacts Criterion**  
 Contributions that (1) effectively integrate research and education at all levels, infuse learning with the excitement of discovery, and assure that the findings and methods of research are communicated in a broad context and to a large audience; (2) encourage diversity, broaden opportunities, and enable the participation of all citizens—women and men, undergraduate students, and persons with disabilities—in science and research; (3) enhance scientific and technical understanding, and (4) benefit society.

Overall Assessment of Broader Impacts:  Excellent  Very Good  Good  Fair  Poor

Mandatory - explain assessment to the applicant:  
*Service back to community with excellence & commitment - his excellence award suggests that - integrates research to education. Broader impact to reach out could be stronger.*

Feedback comments to the applicant on this rating sheet should be constructive and reflect the two NSF merit review criteria: Applicant

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## Impact matters

- Answer the prompt!
- Broader impact in science research? Me?
  - Yes, you.
  - Take this as an opportunity to think about how your work can benefit others!

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## Resources: human

- Harvard Fellowship Office
  - Cynthia Verba
  - Essay review
  - [http://www.gsas.harvard.edu/current\\_students/fellowships\\_office.php](http://www.gsas.harvard.edu/current_students/fellowships_office.php)
- Past fellows
  - Email us with questions
- Advisors, friends
  - Get them to read your essays
  - Advisors know a lot about applying for grants

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## Resources: guides

- Scholarly Pursuits
  - Written by Cynthia Verba
  - Hard copies in fellowship office, but also available online:  
[http://www.gsas.harvard.edu/current\\_students/scholarly\\_pursuits.php](http://www.gsas.harvard.edu/current_students/scholarly_pursuits.php)
- Philip Guo's page on graduate science fellowships
  - Generally good advice
  - <http://www.stanford.edu/~pgbovine/fellowship-tips.htm>

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## Resources: essays

- Reading research statements can give you an idea about how to write about research.
- Sample essays
  - MIT Graduate Materials Council  
<http://web.mit.edu/gmc/GMC%20-%20Academic.htm>
  - Scholarly Pursuits
  - See handout (do not redistribute!)

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## The message

- Apply ASAP
- answer the prompt!
- Use your resources

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How has winning a fellowship changed your life?

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## Discussion with panelists

- Your questions
- Slides contain sample questions

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Did your advisor (or someone else) play a helpful role in the application process?

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What resources did you make use of when applying?

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## References

- Who did you ask for references? How did you approach them? Did you do this pretty early?
- How did your reference letters help show who you are, as a researcher, educator, or person?

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## Discussion on references

- From whom?
- How many?
- What came through?

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What was your approach to the personal statement? What were you able to show about yourself?

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What did you convey in your research statement? How technical was it?

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What did you convey in the previous research statement?

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In all your essays, how did you answer the prompt of broader impact? How did you relate it to your research?

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If you applied more than once, what do you think got you the fellowship the second time around? What changes did you make? Did you look over ratings sheets?

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What about your application did you think was most influential for your getting the award?

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For the NDSEG - how did you squeeze everything into a short essay?

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For the NDSEG - did you point to any military related applications? do you think this matters? Any tips specific to the NDSEG?

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