Thriving in Graduate School and Paying for it

EL Alliance Webinar
April 21, 2011
Mary Ann Leung, Ph.D.
Krell Institute
Overview

- Choosing a graduate school
- Funding graduate school
- A winning application
Choosing a Graduate School

- Why go to graduate school?
- What is graduate school all about (masters/Ph.D)?
- What are your goals after graduate school?
- What is the most important relationship in your graduate school career?
- Identify YOUR most important attributes for picking a graduate school
My criteria & reasons

• Research adviser
• Research project
• School recognition/standing
• Campus/local culture-environment
Funding Graduate School

- Schools
  - Departmental
  - Research adviser (from grants)
  - Other institutional funding
- Government
- Private/foundations
Why apply for your own funding?

• Security
• Independence
• **Prestige**
• Programmatic benefits (DOE CSGF!)
<table>
<thead>
<tr>
<th>Fellowship</th>
<th>Stipend</th>
<th>Tuition &amp; Fees</th>
<th>Tenure</th>
<th>Awards</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Department of Energy Computational Science Graduate Fellowship (DOE – CSGF)</td>
<td>$36,000</td>
<td>Full</td>
<td>4 Years</td>
<td>21 in 2010</td>
<td>$5,000 academic allowance 1st yr, $1,000 every renewed year; 12 wk Practicum &amp; Annual Conference</td>
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<tr>
<td>National Science Foundation (NSF)</td>
<td>$30,000</td>
<td>$10,500 cost of educ.</td>
<td>3 Years over 5 years</td>
<td>2000 for 2010</td>
<td>$1,000 one time travel; International research &amp; professional development opportunities; TeraGrid Supercomputer Access</td>
</tr>
<tr>
<td>National Defense Science and Engineering (NDSEG)</td>
<td>Yr1:$30,500 Yr2:$31,000 Yr3:$31,500</td>
<td>Full</td>
<td>3 Years</td>
<td>Approx. 200</td>
<td>Up to $1,000 for health insurance through the institution</td>
</tr>
<tr>
<td>Hertz (Five year Option 1)</td>
<td>$31,000 (9 mo.)</td>
<td>Full tuition equiv.</td>
<td>Renewable for 5 years</td>
<td>Bi-Annual Symposium; $5,000 per year additional stipend for fellows with dependent children; Tenable list of schools</td>
<td></td>
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<tr>
<td>Hertz (Five Year Coordinated -Option 2)</td>
<td>2 Years: $36,000 (9 mo.)</td>
<td>Full equiv. for first 2 years</td>
<td>2 Years</td>
<td>Bi-Annual Symposium; When awardee accept another fellowship award, Bi-Annual Symposium; $5,000 per year additional stipend for fellows with dependent children</td>
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<td>Hertz (Other Fellowship Period)</td>
<td>$3,500/Year supplemental stipend</td>
<td></td>
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<td>Bi-Annual Symposium; When awardee accept another 3yr fellowship</td>
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### Available Funding

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<tr>
<td>DOE Stewardship Science Graduate Fellowship (DOE - SSGF)</td>
<td>$36,000</td>
<td>Full</td>
<td>4 Years</td>
<td>5 in 2010</td>
<td>$1,000/yr - Practicum &amp; Annual Conference</td>
</tr>
<tr>
<td>NASA Graduate Student Researchers Program (GSRP)</td>
<td>$20,000</td>
<td></td>
<td>3 yrs funding for PhD</td>
<td>140</td>
<td>$6,000 student travel; $3,000 university allowance; $1,000 student health insurance; 10-week HQ or center research experience</td>
</tr>
<tr>
<td>DOE Office of Science Graduate Fellowship (DOE SCGF)</td>
<td>$35,000</td>
<td>$10,500</td>
<td>Up to 3 Years</td>
<td>150 in 2010</td>
<td>$5,000 Research allowance; Did not offer in 2010-11</td>
</tr>
<tr>
<td>Fellowship</td>
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<td>Tuition &amp; Fees</td>
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<tr>
<td>NASA Harriet Jenkins Predoctoral Fellowship (women, minorities and disabilities)</td>
<td>$22,000 PhD</td>
<td>$8,500</td>
<td>3 Years funding</td>
<td>Up to 20</td>
<td>$7,000 stipend for 10-week research experience; Annual symposium; Leadership Development Training</td>
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<tr>
<td>Ford Foundation Predoctoral Fellowship for Minority (college/university teaching)</td>
<td>$20,000</td>
<td>In lieu of tuition &amp; fees $2,000 to institution</td>
<td>3 Years over 5 years</td>
<td>Approx 40</td>
<td>At least one Ford conference paid; Access to Ford Fellows Liasons (alumni of program)</td>
</tr>
<tr>
<td>National Physical Science Consortium (NPSC)</td>
<td>$20,000/yr</td>
<td>NPSC universities - waived tuition and fees</td>
<td>Initial 2-3 yrs, can be up to 6 full yrs</td>
<td>Varies yearly</td>
<td>Employers sponsor student support; one or two summer internship at sponsored employer</td>
</tr>
<tr>
<td>National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc (GEM)</td>
<td>$14,000 yr; equiv to other funded PhD students yrs 2-5</td>
<td>waived tuition and fees at a GEM university</td>
<td>5 yrs</td>
<td></td>
<td>A minimum of one paid internship with a GEM employer member</td>
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DOE CSGF Benefits

- $36,000 yearly stipend
- Full tuition and required fees
- Renewable up to 4 years
- $5,000 academic allowance year 1, $1,000 each renewed year
- Annual conference
- Practicum at DOE Lab
DOE CSGF Requirements

- Good academic standing
- Continued progress towards Ph.D.
- Program of Study (POS) showing graduate coursework in:
  - scientific/engineering discipline
  - applied mathematics, and
  - computer science
- Completion of practicum at DOE laboratory
How is DOE CSGF different?

- Not just a paycheck....
  - Community building
  - High Performance computing support, training, access
  - Careers/Jobs
  - Networking
  - Awards/Contests
  - Life long connections
Community Building

- Annual conference
- Regional events
- Alumni network
- Online resources
- Connections with DOE lab staff
- Professional society meetings
  - SCxy conferences
  - SIAM
  - etc.
Application components

- Completed application form
- Transcripts
- GRE scores
- Program of Study showing breadth in:
  - Scientific or engineering field
  - Mathematics
  - Computer science
- Essays
  - Field of study
  - Program of study
  - High performance computing
- Reference letters
Application review process

• External review committees
• All applications are reviewed by at least 2 people
• Applications are NOT rejected solely on the numbers
• The committee tries to “get to know” the applicants and fellows
But, can I win one of these?

- What makes a good application?
- Compelling story evidenced through:
  - interesting research and interest in research
  - experience (extra-curricular/research)
  - potential
  - essays
  - letters of recommendation
Helpful Tips

• David Keyes – Requesting Ref Letters
  • David Keyes – Requesting Ref Letters

• Rebecca Brannon
  • http://www.mech.utah.edu/~brannon/public/StudentResources
  • Tips for students who are building a resume for a dream job (or fellowship)
  • Requesting letter of recommendation
Links

- Krell Institute
  - http://www.krellinst.org/
- DOE CSGF
  - http://www.krellinst.org/csgf
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