Life after your PhD

Larissa Spinelli - Natali Ruchansky
"You've shed blood, sweat, and tears to get a PhD, now what are you going to do with it?"

- The Guardian

- Post-doc
- Academic
  - Research
  - Non-Research
- Non-Academic
  - Research
  - Non-Research
- Nothing
“Postdocs are central to this nation’s global leadership in science and engineering…It is largely they who account for the extraordinary productivity of science and engineering research in the United States.”

--National Academy of Sciences, Committee on Science, Engineering and Public Policy

- A continuation of research degree
- "Postdocs in academia have more opportunity to publish and more opportunity to be observed and make contacts"
- Many tips for selecting Postdoc
  - e.g. Select a lab/project that develops new skills
- Length of stay depends on future plans
Post-Doc

Median Salary of U.S. Doctorate Recipients 1-3 Years After Degree: Postdoc and Non-Postdoc (2001)
# Academia - Different Options

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Degree Program</th>
<th>Emphasis</th>
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<tbody>
<tr>
<td>Research University</td>
<td>Ph.D</td>
<td>Research &amp; Teaching</td>
</tr>
<tr>
<td>Non-Research</td>
<td>M.S</td>
<td>Teaching</td>
</tr>
<tr>
<td>Other</td>
<td>B.S</td>
<td>Teaching</td>
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Academia - Different Options

Research Institution
- 60-80% Research
- 10-35% Teaching
- 5-10% Service

Teaching-Oriented College
- 50-80% Teaching
- 10-30% Professional Development
- 5-20% Service
Academia - What is expected?

- Publications
- Funding
- Graduate (undergraduate) mentoring
- Talks/conferences/workshops
- Work with professional organizations
- Teaching
  - course prep, grading, office hours
  - good research & bad teacher, vice versa
- Service
  - meetings, committees
Academia - How to get there?

- Research
  - Learn from practice and others
  - Internships
- Teaching
  - TF, tutor
- Service
  - Join departmental committees
  - Organize student groups
  - Volunteer
Non Academic

- Research
- Non-Research

![Comic strip showing a conversation about job opportunities. The first panel shows a person asking for help to find a job. The second panel shows a response that they have come to the correct place and are welcome to the career services center. The third panel shows a person responding that they have hundreds of job opportunities available, but people are literally throwing themselves to hire graduates of this university. The fourth panel shows a person saying that unless they are a Ph.D., they are sorry, they are closed. The fifth panel shows a person slamming the door.](www.phdcomics.com)
Industry - Different Options

Research or Non Research

- Information Technology (IT) companies
  - Software, hardware or services companies
  - Start-ups
  - Spectrum of established companies (small to big)

- Companies in other industries
  - Banking, insurance, telecommunications, healthcare, environmental engineering, manufacturing, travel, …
Industry - Things to consider

- Industry-quality coder vs. prototyping?
- Deep technical support, debugging and testing?
- Well-defined goals and project deliverables?
- Patenting and/or publishing?
- Working on deep research problems?
- Be your own boss (to an extent)?
- Want to go to academia later?
- Impact to company product roadmap?
- Pace of career growth?
Industry - How to get there?

- Internships
  - Try out a corporate culture, job type, industry
- Work on real-world relevant problems
  - Technical skills need to be up-to-date and fluent
- Complete a project(s)
- Build a list of references
- Keep your web presence up-to-date
  - Website with publications, etc.
- Build your professional network, make yourself visible
- Find a mentor(s)
  - Provides a useful perspective
What if I change my mind?

- Must build real systems
- Up-to-date technical skills
- Understand business roadmaps
- Establish visibility and knowledge in industry

Academia

Industry

- Active publishing in top tier conferences
- Active collaborations with academia
- Establish visibility in research community
# Pros and Cons

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<table>
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<tr>
<th>Academic</th>
<th>Industry</th>
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<tbody>
<tr>
<td>+ Freedom</td>
<td>- Focused direction/goal</td>
</tr>
<tr>
<td>- Need funds</td>
<td>+ Money/Salary</td>
</tr>
<tr>
<td>+ Be mentor/role model</td>
<td>+ Resources</td>
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<tr>
<td>+ Flexible time frame</td>
<td>- Tighter agenda</td>
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<tr>
<td>- Work comes home w/you</td>
<td>+ 9-5</td>
</tr>
<tr>
<td>+ Collaboration</td>
<td>+/- Variety</td>
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<tr>
<td>+ Variety</td>
<td></td>
</tr>
<tr>
<td>+/- Teach</td>
<td></td>
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Disclaimer: It depends! (on personal preference and specific position)
Credits

- http://lifeafterthephd.com/
- www.cpst.com