IHPCSS MENTORING: CAREER WORKSHOP

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1. SESSION OVERVIEW

1.1. SCHEDULE

15 min	Career Paths Talk
45 min	Breakout Sessions 1.1

- Resume Review
- Presentation Skills
- Networking & Elevator Pitch
- Interview tips

1.2. DISCLAIMER

- This is a *quick* talk, with links to some other resources.
- You don't need to know exactly what you want to do, but it's good to have an idea of the possibilities.
- Talk to the staff here about their career experiences and see which options appeal to you.
    - This makes a good topic for your one-on-one discussions

1.3. GENERAL CAREER PATHS

2. ACADEMIA

2.1. ACADEMIA

- Teaching at a college or university
- Each institution has a difference emphasis on 3 areas:
    - Teaching Responsibilities
    - Research (winning grants and writing publications)
    - Community Service (departmental roles, conference & journal organization)
- Some initial funding comes from the school, but then you must find more money

2.2. ACADEMIC CAREER PATH (US)

titles may be different in different countries

1. Post Doc (optional)
2. Assistant Professor, tenure track
3. Tenure
4. Full Professor

2.3. ACADEMIA PROS

- You get to work with students through teaching and research
- You get to build your own lab
- Once you have tenure...
    - You are "unfireable and almost rich"
    - Can explore any research topic you want (*if you can get funding*)
    - Long term career path and stability

2.4. ACADEMIA CONS

- You *have* to work with students, teaching whatever classes need to be taught
- Getting tenure is difficult
- You have to move to wherever the school is

2.5. HOW TO GET STARTED

- Try teaching / being a teaching assistant
- Try mentoring undergraduates, new graduate students
- Talk to professors in your department
- *Talk to Scott Callaghan, Tom Cheatham, Frank Jenko, Erik Lindahl, Danel Silver*

3. INDUSTRY

3.1. INDUSTRY

- Beholden to customers, must create products to sell
- Can work on government contracts / grants

3.2. INDUSTRY CAREER PATH

- Varies by scientific field & company
- Larger companies typically have well-defined career paths with a specific progression of job titles
- May look something like:
    1. Individual contributor
    2. Project lead
    3. Technical Expert

3.3. INDUSTRY PROS

- Pay is usually higher than academia
- Company perks: free food, stock options, bonuses, sabbaticals
- May have the freedom to work remotely or more options of where in world/country to work
- You work with/for the customer
- Higher turnover, you can have a more varied career and change roles every few years

3.4. INDUSTRY CONS

- You have to make a product / make a profit for the company
- Less freedom to do "pure" research
- You work with/for the customer
- Company culture may not have the best work/life balance

3.5. HOW TO GET STARTED

- Look for summer internship programs
- Go to career fairs / recruiting sessions
    - at your university
    - at conferences
- *Talk to Sahil Chhabra, Pawel Janowski*

4. SUPERCOMPUTER CENTER

4.1. SUPERCOMPUTER CENTER

- Could be associated with a University or Government Research lab
- Funding could depend on current political climate or vary depending on your current project
- Best of both academia and industry worlds:
  - No required teaching responsibilities
    - option to work with summer interns
    - possibility to do HPC training sessions
  - Understand basic research activities, such as publication and conference attendance

4.2. SUPERCOMPUTER CENTER CAREER PATH

many paths available, depending on role

1. Individual contributor; Consultant/user support; Trainer
2. Team Lead or Project Lead
3. Management or Technical Expert

4.3. SUPERCOMPUTER CENTER PROS

- Opportunity to do a specific role, such as user support or application development
- Opportunity to do "pure" research/get grants
- Some labs may have a "mission"
- No required teaching responsibilities
- Culture typically has good work/life balance

4.4. SUPERCOMPUTER CENTER CONS

- Government bureaucracy
- Federal funding, not as many perks as industry
- Not as well paid
- Employees are typically there for a long time, some can become "Retired In Place"
- Career path may be limited, depending on size/needs of the center

4.5. HOW TO GET STARTED

- Look for lab people in your research area, ask about an internship
- Look for summer internship programs
- Research if there are citizenship preferences for different labs
- *Talk to Elsa Gonsiorowski (Government Lab), Weronika Filinger (Academic HPC Center), Ilya Zhukov (HPC Center)*

5. RESOURCES

5.1. RESOURCES

- A PhD is Not Enough! by Peter J. Feibelman
- Tomorrow's Professor by Richard M. Reis
- The Psychologist's Guide to an Academic Career, by Harriet L. Rheingold
- Career Next Steps, Elsa Gonisorowski
- The Postdoc: A Special Kind of Hell, Adam Ruben
- Illustrated Guide to a PhD, Matt Might
- I did a PhD and did NOT go mad, Richard Butterworth

6. BREAKOUTS

Resume Review
Elsa Gonsiorowski
Presentation Skills
Ilya Zhukov
Networking & Elevator Pitch
Weronika Filinger
Interview Tips
Scott Callaghan

7. CREDITS

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