Finding an Advisor

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Resume of a Genius

“Most Illustrious Lord, ... I shall endeavor to explain myself to your Excellency, showing your Lordship my secrets, and then offering them to your best pleasure and approbation ...”

1. I have a sort of extremely light and strong bridges, adapted to be most easily carried....

2. I know how, when a place is besieged, to take the water out of the trenches, and make endless variety of bridges, and covered ways and ladders, and other machines pertaining to such expeditions...”

Leonardo Da Vinci, 1482
A PhD program is an Apprenticeship

Like Da Vinci, you have to convince your potential advisor that you’re a good apprentice

More importantly, ensure that your future advisor is

• a good research advisor
• a good mentor
• a good fit
What should a good advisor/mentor do?

• Teach you fundamental research skills. How to
  – Prepare papers, talks, & proposals
  – Critically read the literature
  – Technical foundations

• Guide you to
  – Find a research topic
  – Develop your identity as a researcher

• Demonstrate for you
  – Balance, research ethics, an intellectual roadmap

• Foster your career development
  – Through your PhD to your first job & promotion
    …and next job and promotion
This is a life-long relationship
How to find a good advisor/mentor

When looking for an advisor in a new university

• Get to know them and get them to know you
• Be persistent (but don’t pester)
• Know their research, read their papers, and ask informed questions
• Meet in person
• Talk on the phone
• Talk to multiple grad students in the lab!
• Understand expectations about workload (courses vs research) and funding
How to find a good advisor/mentor

Often you need to find an advisor (or change advisors) at your current university). In addition to the above, also
• Go to office hours
• Take a class
• Take research hours or an independent study
• Attend lab meetings if they allow it
• Get to know the other graduate students in the lab:
  – they tell you about the advisor
  – they are your close colleagues, collaborators, & community for many years
Assess the fit

- Find names that pop out as you research topics you are passionate about
- Your advisor should be respected in the field
- Deep thinker who encourage students to do seminal work
- Where do you fit in their lab? What is the lab structure?
- Understand what they expect from their grad students
- What is their philosophical bent? Does it align (or not conflict) with yours?
- Is the advisor supportive of women, URM and students with disabilities?
My own journey to find advisors & mentors

- I was changing fields from Computer Science as an undergrad to Biology for PhD
- I knew I wanted to be in an environment that fostered big ideas and valued interdisciplinary approaches
- I didn’t know anyone with a PhD
- I knew nothing about the process, and I didn’t even know that I was naïve.
- I found multiple potential faculty advisors in different departments, and I was excited about their research. The fit felt right.
- In-person visits and, meetings with other PhD students in their labs convinced me that I had found the right place.
- Advisors as mentors vs advisors + mentors – both can work!
Great qualities in my advisors & mentors

• They care about my success
• They encouraged me to think big and prodded me to produce
• They guided but rarely pushed -- waited for me to discover the next big question, let me determine the direction of my research
• Encouraged me to be first author on my research
• Actively connected me to their networks
• Used their prestige and contacts to help my career
Finding advisors for interdisciplinary research

- One, two or more advisors and mentors?
- Do they appropriately balance breadth vs depth of research?
- Do they have a core identity that supports or overlaps with yours?
- Are they open-minded and enthusiastic about learning from other fields?
- Can they provide financial support for interdisciplinary research?
- Will you find a community of researchers that support your work?
Take home messages

Do your research about your research advisor & find an advisor who is
• A good research advisor
  – Productively engaged in research you are passionate about
  – Willing and able to effectively teach and guide you in research
  – Able to help fund your research
• A good mentor
  – Cares about your career & effectively supports your success
• A good fit
  – Personalities, research style & philosophy, lab structure and people
• It takes a village: You may need more than one advisor and mentor
• It’s a two way street: Communicate to your advisor the support that you need & try to work out problems