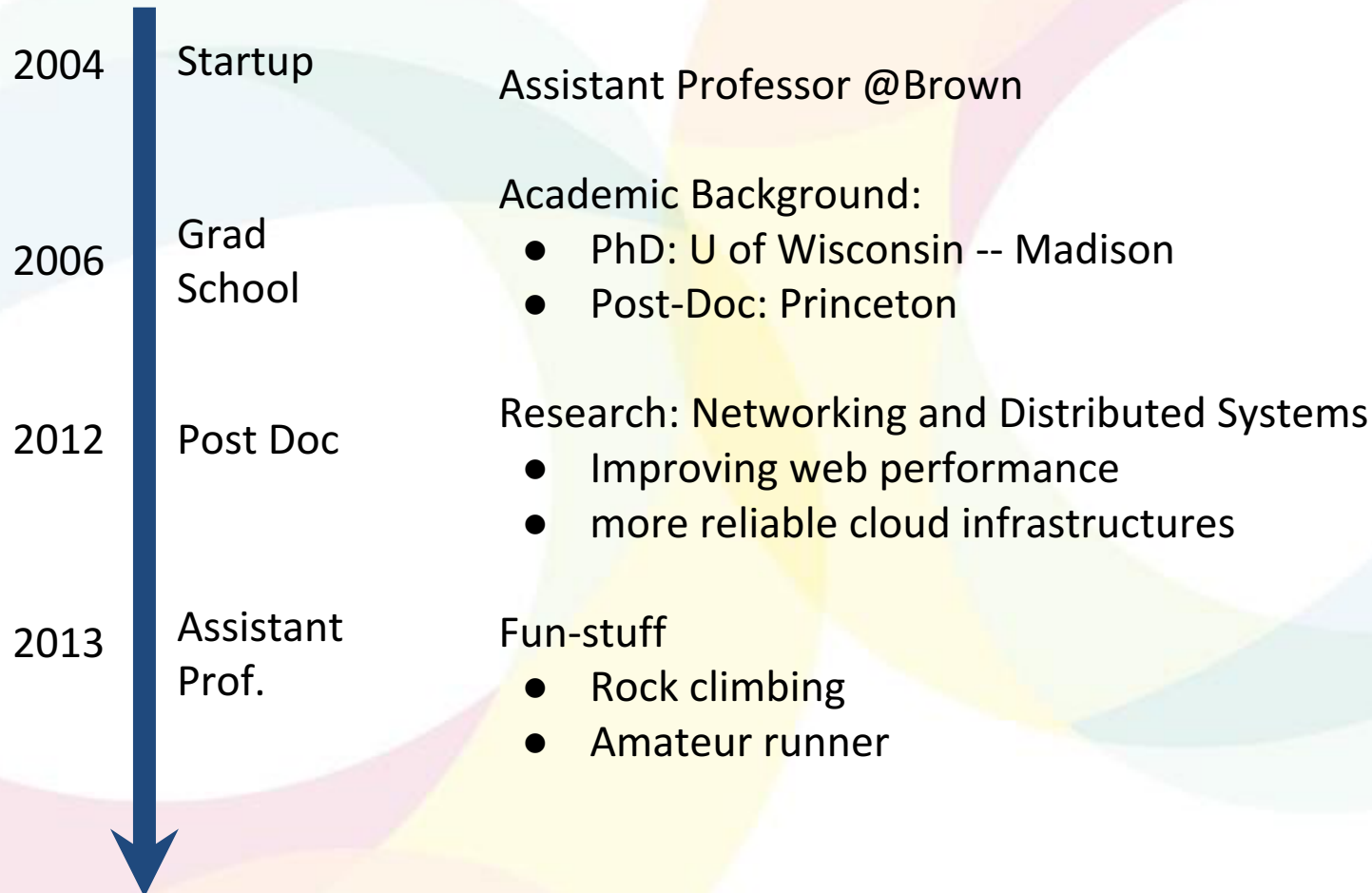


Finding an Advisor and Developing an Effective Working Relationship with Them

Nancy Amato, University of Illinois
Theophilus Benson, Brown University

Theophilus in One Slide



Nancy in Brief

- PhD @ UIUC; MS @ Berkeley; BS applied math & econ @ Stanford
- Prof @Texas A&M: 1995-2018
- Prof & Dept Head (back at) @UIUC: since Jan
- Research – Applied Algorithms
 - robotics, computational biology & geometry, parallel algorithms
 - Graduated 3 PhDs (10 profs, 9 research labs, 2 postdocs, 3 startups)
- Other stuff
 - Bernese Mountain Dogs (currently Fred & Wilma)
 - Husband Lawrence – grad school, A&M & UIUC
 - Recent highlights: bucket trip to Machu Picchu, Diving!

Outline

- What is a good advisor?
- How to find an advisor?
- How to manage your advisor?
- Discussing change with your advisor!

A PhD program is an Apprenticeship

An ideal advisor

- 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

Finding An Advisor

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! (including graduated students)
- Understand expectations about workload (courses vs research) and funding

How to find a good advisor/mentor

- **Get to know your potential advisor(s)**
 - Meet them (in person/skype/phone)
 - Know their research
 - read their papers
 - Be persistent (but don't pester)
 - and ask informed questions
- **Get to know their lab culture**
 - Talk to multiple grad students in the lab!
 - including graduated students
 - (and) ex-students
 - Understand expectations about workload
 - (courses vs research)
 - Impact of funding structure

Assess the Advisor Fit

- Assess fit along multiple dimension:
 - Research topics
 - Advising style
 - Lab culture/structure
 - Support for URM-D
 - Status within the community
 - Expectations from students

Be Systematic in analysis of potential advisors

Assess the fit

- Find leaders in research topics you are passionate about
- Your advisor should be respected in the field
- Deep thinker who encourages students to do seminal work vs the job done
- 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 with yours?
- Is the advisor supportive of women, URM and students with disabilities?
- Be systematic in your assessment as though you were assessing candidates. List what you are looking for and what your advisor can realistically provide.



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Finding advisors for interdisciplinary research

- One, two or more advisors and mentors? Often, it takes a village.
- 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?

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Exercise: Ask Faculty Member to Work with them

- Pair up with a partner
- You will role play talking with a faculty member in their office and ask them if you can join their research group.
- Take 2 minutes to do this, and then switch roles.

Managing Your Advisor

Communication is key to management

- Multiple vehicles for communication
 - Weekly meetings
 - Group meeting
 - One-on-one
 - Emails
 - Keep emails short and direct
 - All messages are read --> responses may be slow
- Ask for more time if you need it

Make the Most of Every Interaction

- **Mentally outline** the meeting
 - Identify discussion points
 - Verify/validate the motivation behind each discussion point
 - Send out an agenda before the meeting
- Double-check results and assumptions
- Maintain project archives
 - Take notes, organize them, and send out summaries

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Discussing Change

What if its not working....

Sometimes, despite all your good efforts, things don't work. How to handle it depends on the situation

- poor working style fit
 - can often be addressed, if all else is ok
- poor research fit
 - harder to fix, but decision depends on how far along you are and your long term goals
- something more serious is wrong
 - requires major adjustment

Try to remember, changing advisors is NOT the end of the world:

- In most cases, if you feel there is a problem then your advisor likely feels that way as well
- While changing advisors may cost some time, it may be less than you think and may be made up by better results/outcomes



Exercise: Hard discussions with your advisor

- Pair up with a partner. Pick one of the topics of discussion with your advisor, or another of your choosing, and role play it with your partner.
- Take 2 minutes to do this, and then switch roles.

Scenarios:

- Tell your advisor you would like to work on one of the other projects in your group.
- Tell your advisor you feel you should be a co-author on a paper your labmate is working on.
- Tell your advisor you are ready to graduate.

Final Thoughts

Take home messages

Do your research! Look for

- 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

Questions?

Resources

- A site with some good tips (some of which we've adopted & adapted for this talk):
<https://greatresearch.org/2013/08/14/managing-your-advisor/>