Planning Your Research Career

Julia Hirschberg, *Columbia University*

H. V. Jagadish, *University of Michigan*

Planning Your Research Career

TAKE 2

H. V. Jagadish

Professor, U. Michigan

Data Management, Data Science

Research Career Highlights

1. Built and managed a department in AT&T Research.
2. Advised about 20 Ph.D./Postdocs (so far) in academia.
3. Led creation of the sub-field of database usability.
4. MOOC (on Data Science Ethics) on EdX and Coursera.
5. ACM Fellow, AAAS Fellow, SIGMOD Contributions Award.

Ph.D. Stanford; AT&T/Bell Labs for 14 years; UIUC; UM since 99.

Now Bernard A Galler Professor of EE and Computer Science, and Distinguished Scientist at Michigan Institute for Data Science

What is your most important resource? (View 1)

What is your most important resource? (View 1)

- **Your Graduate Students!**
  - Hire immediately
  - Lower your expectations for year one
  - Do not waste your time
  - Models of meetings: weekly/drop by/group
  - Pay for them to attend conferences
  - Make sure they can communicate in English well (find courses)

What is your most important resource? (View 2)

What is your most important resource? (View 2)

- **Your Time!**
  - Learn to say No! (to lots of things)
  - Struggling students will take more of your time.
  - Even good students need time getting started. Hire deliberately and carefully!
  - Consider hiring postdocs and working with senior students (co-advising)

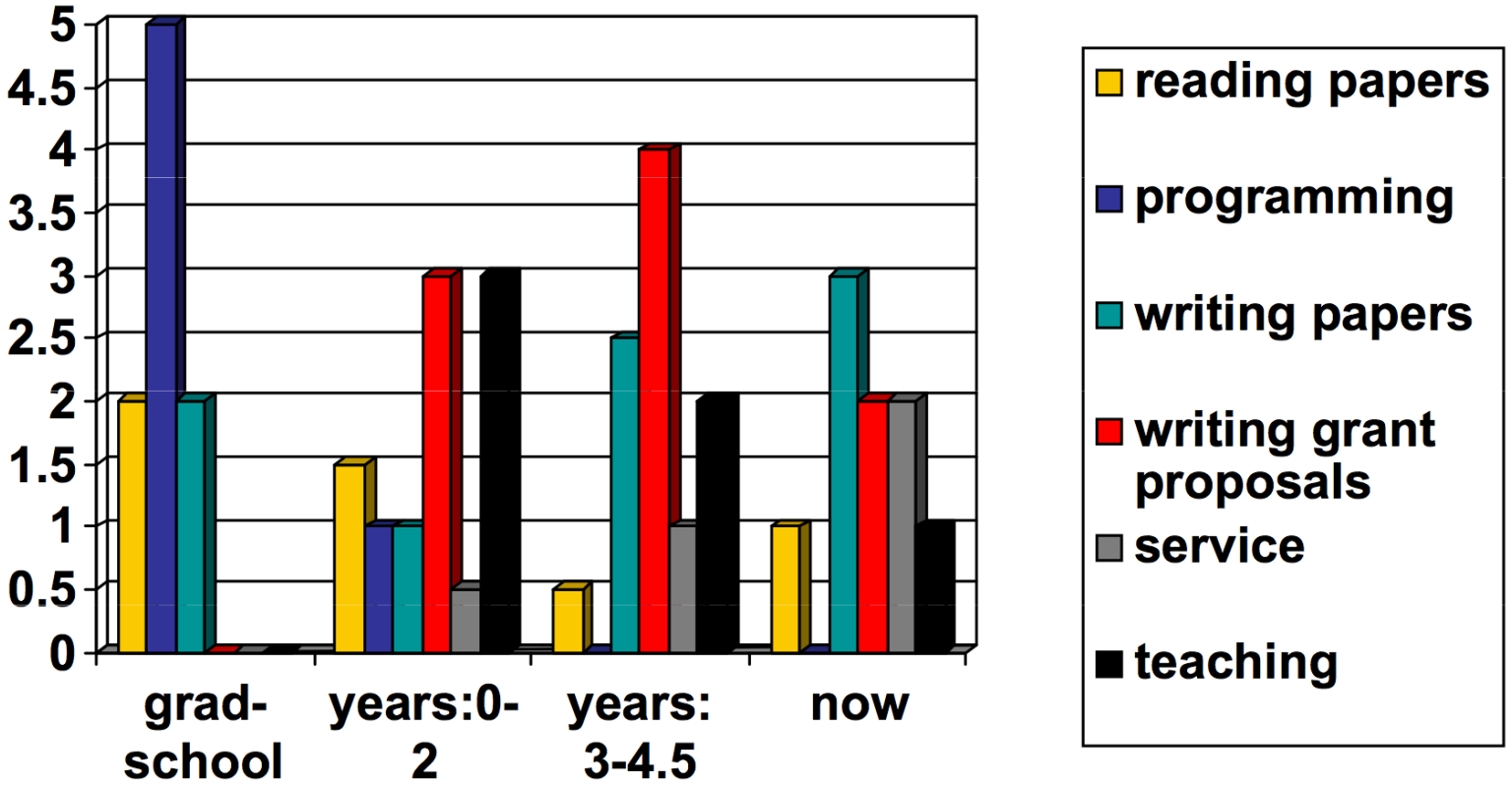
A Good Rule of Thumb

- When asked if you would be willing to sign on for something where the work will be due "in six months"…
- Ask yourself: "Would I be willing to do this by next week?"

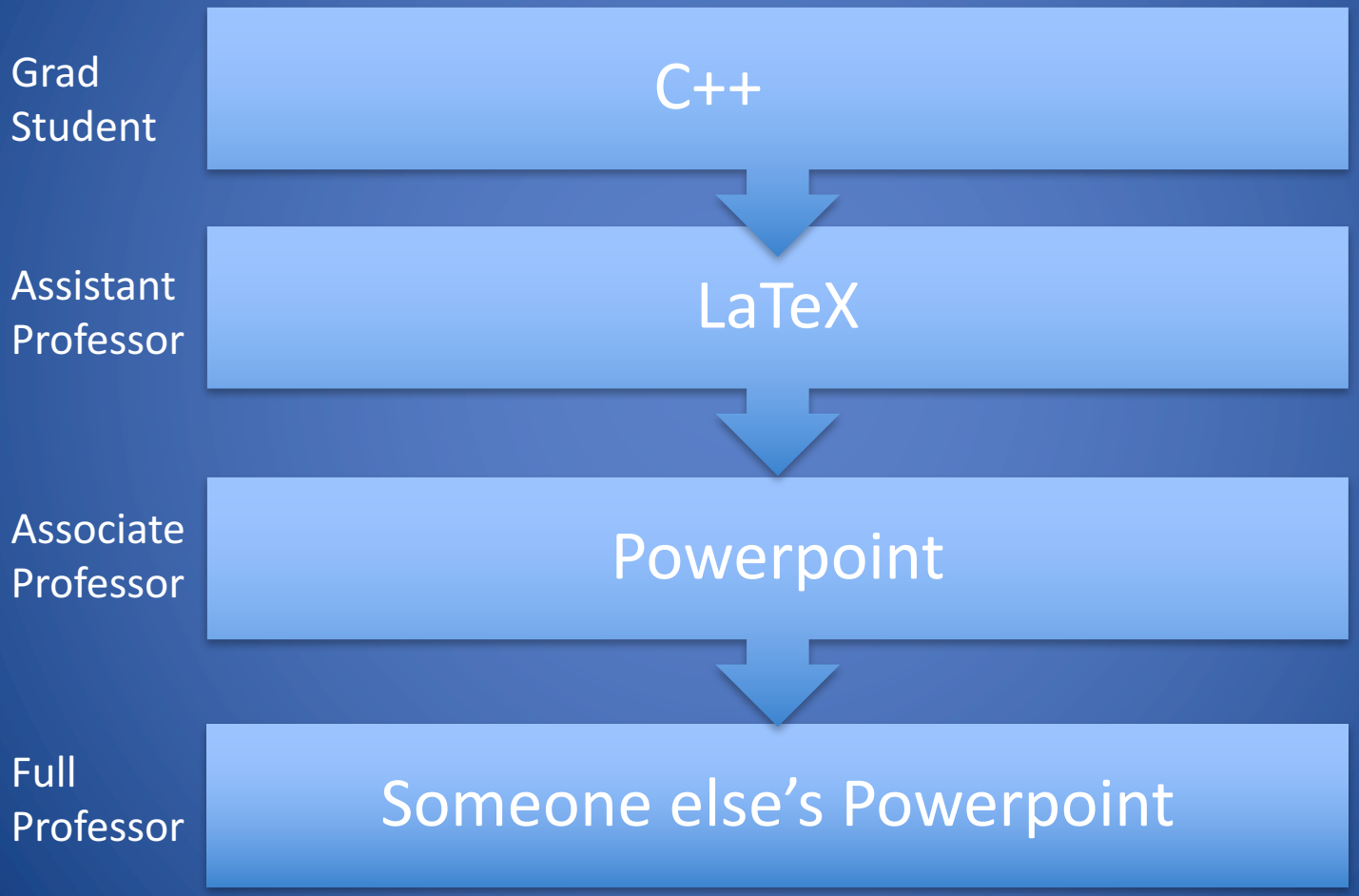
- Because eventually it will be due in a week!

How do we spend our time?

(averaged across the academic year)



Alternative View: Primary Language over Career



Credit (blame) to Donald Kossmann, ETH Zurich/Microsoft

Collaboration: Why & How

- Successful collaboration is a multiplier
  - Enables you to achieve more than you can on your own, is fun, and brings new friends and colleagues
- Unsuccessful collaboration can be a negative multiplier
  - Wastes time, bores you, is stressful, creates hard feelings
  - Avoid upfront if possible… but if not, leave gently

Collaboration: Do's & Don'ts

- Do
  - collaborate with successful people (check them out)
  - be a good collaborator yourself (timely, quality work, good colleague)
  - recruit good students (review applications, project courses (Ugrad, MS), teach grad reading class, summer REUs, siblings even)
- Don't
  - collaborate with freeloaders (do learn to say no)
  - be a freeloader yourself

Funding Do's

- Visit funding agency sites regularly
  - Talk to appropriate program manager(s)
  - Volunteer to serve on review panels
    especially for types of proposals you plan to submit
  - Expand your funding sources (e.g., industry)
- Seek advice/examples from colleagues
  - Ask successful colleagues to review your proposal and ***LISTEN*** to their feedback
- Understand the program you are submitting to
  - Read the program announcement **carefully**
  - Read funded summaries/proposals of projects from that program

Funding Do's

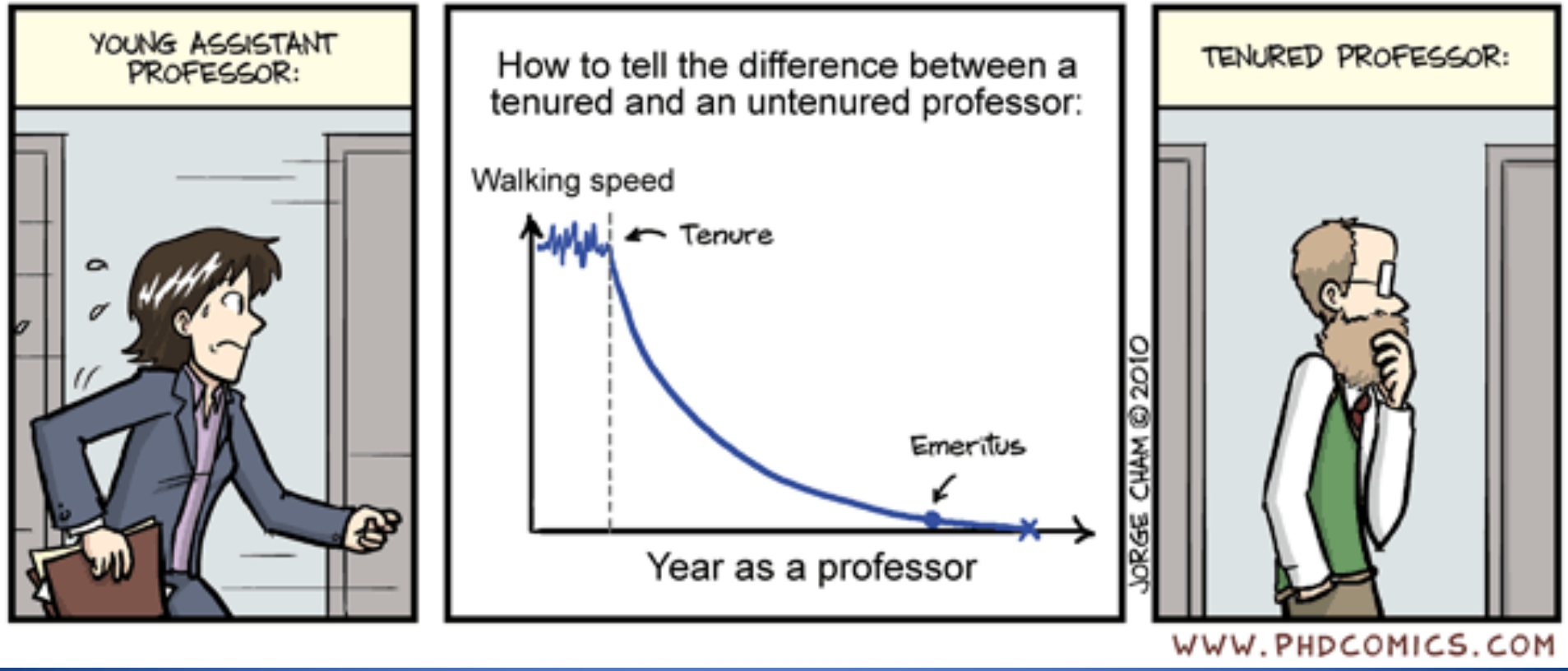
- Fund your research through a variety of sources
- If at first you don't succeed, try, try again
  - Read reviews carefully
  - Don't take it personally
  - Talk to program manager
  - Be persistent
- Write a few GOOD proposals
  - Immature ideas/plans rarely get funded
  - Borrow sample proposals from successful colleagues

Other Academic Career Advice 1

- Understand what it takes to get tenure at your institution, but … *don't just stop at min*
  - Papers
  - Teaching
  - Grant $
  - Service in/out of department/university
- Don't be afraid to think and work broadly, but be sure to establish yourself in a core "home" community
  - Impact
  - Letter writers
  - TPC and journal board invitations
- Stop (or slow down) working with your advisor (after thesis papers published) … but keep in touch!
- Be willing to work hard … *and don't stop when you get tenure*

Other Academic Career Advice 2

- Don't obsess about tenure
  - **Focus on good work** and tenure will come but … *keep getting feedback and listen to (most of) it*
  - Your university went through a lot of trouble to hire you and wants you to succeed
- Make sure you have a "buddy" on the faculty and **several mentors** (both on and off campus; both in and outside your field)
  - Your mentors will change over your career
- Take sabbaticals and leaves as they are offered
  - Leave home: go to other schools, industry, government, abroad
  - There is **never an ideal time**, just do it!



AND have some fun along the way!

Other Advice

- **Students** are the coin of the academic realm
- **Family and friends** are the coin of the real world and happiness
- **POINT:** Make time for yourself, your family, your friends, …. AND

Resources

- Dave Patterson's Non-Technical Talks
  - http://www.cs.berkeley.edu/~pattersn/talks/nontech.html
- Jeannette Wing's Tips on the Interview Process
  - http://www.cs.cmu.edu/~emigration/interview.pdf
- Jeannette Wing's "Twelve Tips for Department Heads from an NSF Perspective"
  - http://cacm.acm.org/blogs/blog-cacm/54177-twelve-tips-for-department-heads-from-an-nsf-perspective/fulltext
- Advice about everything:
  - http://web.engr.illinois.edu/~taoxie/advice.htm