Courses, Quals, and Thesis: Roadmaps and Advice for Graduate Students

Yolanda Gil

http://www.isi.edu/~gil

ISI Graduate Student Symposium, November 2011

Photo credit: PhD student Jason Riesa
Much Advice on the Web: My Favorite References Back Then

- Transcripts from the CRA Workshop on Academic Careers for Women (1993)
  - http://www.isi.edu/~gil/misc/fcrc.html
- Many sites, the only one still alive is:
- “Making it Through the PhD Program Panel Notes”
  - http://www.isi.edu/~gil/misc/GettingThroughPhD.html
- http://www.isi.edu/~gil/misc/info-for-cs-phds.html
1) Be Aware of the Overall Process

Jaime Carbonell’s View of the PhD Program, circa 1985
1) Be Aware of the Overall Process

You might think:

Courses

Define thesis topic

Quals

Thesis work and writing

Defense, job search
1) Be Aware of the Overall Process

Courses

Define thesis topic

Quals

Thesis work and writing

Defense, job search
1) Be Aware of the Overall Process

Major transition
2) Your Advisor as Your “Coach”

• Share any concerns
  – There is nothing they have not heard before
• Learn what books don’t say about research
  – when a question is important
  – how to look for answers
  – how to identify good ideas
  – how to explain your work to others (papers, talks)
• Be a responsible student
  – Prepare something interesting to discuss at meetings
  – Listen: experience counts for something
  – Grow as a student and then as a colleague
3) Learn from Other Students

• Examples of how to go through the PhD
  – What are good topics for a thesis
    • What were bad topics
  – How to approach quals, defense
    • How not to approach quals, defense

• Similar experiences and challenges
  – Important support network

• Get their feedback on your research
  – Give talks, get comments on your papers

• Future colleagues after you graduate
  – In your area
  – In other research areas
4) Plan Your Work

- Take initiative, but work with advisor
- Define goals
  - 6 months out -> 1 month out -> 1 week out
- Be independent
  - Carry on your plan
  - Change plan if needed (work with advisor)
- Keep motivated
  - Good results, talks, conferences, any improvements
- Never lose momentum
  - After courses, after quals, after conference, after defense
5) Network with your Research Community

- Learn to discuss your work casually (in conferences, etc)
  - 1 sentence (thesis/paper title)
  - 1 paragraph (thesis/paper abstract)
  - Talks and presentations
- Know **their** work
  - Relate your work to it, ask questions
- Learn to write and give talks
  - Papers -- get comments from advisor, other students
  - Talks -- practice with advisor, other students
  - Discussing your work -- practice with advisor, students
- Other faculty and visitors can serve as proxy
  - Request meetings to discuss your research
6) Manage Your Time

• Manage your reputation: Be responsive and timely to requests from others
  – Paper reviews, requests, revisions
7) Think Long Term

- Know where you are in the process, start preparing for what is ahead
- Prioritize your goals as you learn about the process
- Long long term:
  - Your new job
  - Your career
  - New duties (organizing conferences/workshops, reviewing, etc.
- Your current colleagues
  - Future reviewers
  - Future funders
8) Publish and Productify

- Identify products of your work that you can report to others
  - Your advisor
  - Your peers/group
- Write “paper seedlings”
  - “internal” reports to yourself
  - Share with advisor
- Keep conference deadlines in mind
- Possible journal papers
  - Including surveys of your research area
9) Don’t Dispair

- Look for help
  - Advisor
  - Students
  - Faculty
  - Colleagues
  - Friends
  - Family

- Do you have what it takes?
  - Love of research and ideas
  - Persistence and motivation
10) Have Fun!
What You Can Do Today

• Seek advice
  – Find yourself (several) mentors and talk to them regularly

• Organize your calendar and plans
  – Have concrete goals for today, for this week, for this month
  – Have longer term goals for next significant events

• Talk to colleagues, attend seminars, meet visitors

• Debug your work
  – Work with your advisor to prepare talks and get feedback

• Plan to attend conferences
  – Approach people (be prepared: their work & yours), don’t be shy
  – Follow up with pointers to your work

• Improve your web site!

http://www.isi.edu/~gil/misc/info-for-cs-phds.html