

# Reflections on “Getting a Job in an Industrial Lab”

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## ***Your Internship***

- An internship is single most valuable thing you can do, other than completing your dissertation, to get a job in an industrial research lab.
- Maintain a relationship with your mentor during academic year and in future, because they can support you during graduate school and your early career.
- Internship mentors can and should write letters of recommendation for fellowship/grant applications, other internships, and job applications. Their letters provide a different perspective from your advisor's and are highly valued by recruiting committees.
- Write workshop or conference paper with your mentor about your summer project.
- Use your mentor as sounding board during your graduate school years. They have had many of the problems you may have encountered, e.g., advisor troubles, subject troubles, life-work balance, 2-body problems, etc.
- Find other mentors. Check out MentorNet <http://www.mentornet.net>. Send me email if you have questions about MentorNet.

## ***Dissertation***

- If appropriate, use mentor(s) to vet your dissertation topic(s).
- Almost everyone can benefit from having a realistic application of their dissertation results. Industrial-lab mentors can provide very real, very hard practical problems to motivate your work. Often work in the academy is viewed as overly sanitary to industrial researchers. A realistic application domain will strengthen your dissertation, your publications, and your attractiveness to an employer.

## ***Developing a Professional Network***

- **You** are responsible for making professional contacts outside of your university, whether they are professors at other universities, industrial researchers, or other graduate students.
- Your advisor/mentor can/should help with introductions, but you must pursue and maintain these relationships yourself.
- At workshops and conferences, introduce yourself to people whose research is related to yours or in which you are interested.
- When you read an important paper related to your research, send an email to the authors to let them know how you are using or might like to use their results. Everyone loves attention! Ask whether they would be willing to read a draft of a paper and provide you with feedback. This is often a good way to strike up a new collaboration.

## ***The Job Search***

- **Remember: Getting a job IS a job!** Do not underestimate the time it will take to prepare your application package, solicit letters, send follow-up emails, prepare and perfect your job talk, attend and recover from interviews. Do not expect to write chapters while you are “on the road” interviewing.

## **Job Applications**

- A typical application package includes your curriculum vitae (CV), a research statement and a teaching statement.
- When your application package is ready, ask your advisor and your internship mentor to review it.
- Your letters of recommendation are **CRUCIAL**
  - In addition to you advisor, ask a variety of people if they can write you a **strong, personal** letter. A letter beginning “I have followed X's work...” is not as valuable as “I have worked closely with X for the past 3 years and can comment on his strengths and weaknesses in detail.”
- We weight letters from internship mentors quite heavily, probably more so than a university would, because your experiences as an intern directly relate to your potential for success with us.
- What do industrial research groups look for?
  - Ability to conduct individual research, as evidenced by papers and original thinking.
  - Ability to build systems, especially systems that are used by people other than you. Evidence of the system's existence and use (source code, libraries, mailing list etc.) is important.
  - Evidence that others think your work is original, e.g., citations, patents.
  - Ability to work in groups of different sizes, lead others, and collaborate with people who are different from you in almost any dimension (gender, ethnicity, race, age, expertise, etc.).
  - Ability to speak and write effectively.
  - Ability to target your communication to a particular audience.

## **Job Talk**

Preparing a good job talk is an art and a subject unto itself. An incomplete list of suggestions:

- Do not attempt to report on every result that you have ever produced. Focus on the problems that you thought were most important and most interesting. If you are interested in the problems, the audience will be interested as well.
- Practice, practice, practice! Give talk to your advisor and close colleagues first. They will be hardest audience. Ask them for honest and constructive feedback. Then give talk to others in your dept who do not know your work. After your practice talk, ask the **audience** to tell **you** what your contributions are. You may be surprised by what you here. Use this feedback to improve your talk.
- Videotape or record **you** giving your talk, then watch/listen to yourself. This is a very humbling experience. Record how much time you spend on each slide. Try to keep an even pace. Make transitions between slides and subjects smooth. Minimize the number of words to make each important point. Be sure to look at audience and observe whether they are paying attention and understand what you are saying. Provide pauses where audience can ask questions.
- Videotape **your audience** watching your talk, then watch them listening to you. This is an even more humbling experience and will make evident when people are bored or confused.
- Try typing out exactly what you will say for each slide, and then edit out unnecessary words.
- Know your audience! (See Interview below) You will need to adjust your talk for different audiences. Remember the poor guy who spent 15 minutes defining TCP when speaking to networking experts!

## **Interview**

- Do your homework! Learn about the organization that you will be visiting before your interview. This takes time and effort, but is absolutely worth the investment.
- Ask your host for your schedule at least one week before interview. Look up the people that are on your schedule or ask your host about them. Learn a bit about their position and work so you can

ask relevant questions.

- Schedule a brief phone meeting with your host a week or so before your interview to ask any questions you may have, e.g., about your schedule, who will be in audience at your talk, etc.
- If you need breaks in your interview schedule to attend to personal needs (e.g., breast-feeding mothers, diabetics, medication) let your host know how and when you need breaks before you arrive for your interview so they can accommodate you.
- Ask informed questions. In addition to technical discussions, ask the hiring manager and/or lab director about how the organization functions. What is the funding model? How does a researcher choose a problem to work on? How is a researcher's time spent (on own research, service to company projects, service to organization, etc.)? What are the criteria for attending conferences and for business travel? How are researchers evaluated? What are opportunities for advancement? Do new researchers get mentors?
- Before completing interview, you should be told how a decision will be made. If that does not happen, ask the hiring manager how and when a decision will be made and raise any issues that pertain to your ability to accept an offer (e.g., 2-body problem, family obligations, etc). In the US, potential employers are prohibited from asking you personal questions due to equal-opportunity labor laws. However, **you** are free to ask the employer questions about your personal circumstances. Transparency is helpful for all those involved.

### ***Decision Making***

- Try to make timely decisions (the corporation will likely be slow, but you need to be prompt!).
- You never know when you might be looking for a job again, or the company is looking for you, so always finish the interview on positive terms. Even if you do not receive a job offer, keep the door open for future interactions. Our technical world is very small, and you will cross paths again.

Good luck!