Getting an academic job

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Contents:

Other sources of advice

There is a vast amount of advice about getting an academic job available online and elsewhere. Everyone who has ever landed a faculty position seems to consider him- or herself an expert; take this with a grain of salt, but do take advantage of their information. This document is not intended to be comprehensive, but I do hope that it helps you. Some helpful resources are:

- From the [National Research Council (NRC)](#):
    - [*"Academic Careers for Experimental Computer Scientists and Engineers"*](#) (1994)
      PostScript: [preface](#) [summary](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [A](#) [B](#)
    - Ignore the NRC "Graduate program rankings", which have been discredited
- From the [University of Washington CSE department](#):
    - [UW CSE collection of advice on finding jobs](#).
      There is plenty of material here, some of it valuable, some of it not so helpful. (As of February 2003, it is accessible only from UW.)
    - [UW Self Study for 10-year review](#).
      This lays out many issues a department needs to address in setting its priorities and determining its future. I found it extremely helpful in evaluating other schools.
- *Getting What You Came For: The Smart Student's Guide to Earning a Master's or a Ph.D.* by Robert L. Peters, ISBN 0374524777.
  It's a good book that mostly contains common sense about your graduate career, but common sense that is all too easy to forget. Many such books are overly specific to the author's technical field, but this book is general without being useless. (Warning: Don't overreact to the first chapter, which contains attention-grabbing, unusual, and unlikely scare scenarios. Such situations are both rare and easy to avoid.)
- [Zach Ives](#)'s collection of [tips on interviewing](#).
- [The academic job search process](#) collection of links at [MPI-SWS](#)

Suggestions of improvements to this document (or other resources to list) are appreciated. Please send them to [mernst@cs.washington.edu](#).

Before applying

Network. You've heard it many times, but it's true. If you know someone or otherwise have an in, you are much, much more likely to get an interview, be given inside information, etc. Schools may be

more likely to go with a known quantity than to gamble on a candidate that no one there knows personally. Some strategies include talking to departmental visitors, schmoozing at conferences, and sending (references to) your papers to people you reference or are professionally acquainted with. Also see Phil Agre's "Networking on the network".

Work broadly. I found it a plus to have published in multiple areas. I got recommendation letters from faculty outside my area, I could talk to almost everyone about some aspect of my work, and lots of people could believe they were hiring an ally. (I noticed that the better-ranked the school, the narrower and less interested in topics outside their own field the faculty tended to be.) You need to have true depth in one area; it is a danger to appear scattershot. Beware of being too cross-disciplinary. This might weaken you at some institutions, where you can fall between the cracks or not pass the bar in any one of your specialties.

Write a paper on everything of substance you do: most of it is publishable, the only question is where to publish. However, you must trade this off against diluting your c.v. with lots of junk, such as papers in low-ranked conferences, papers in workshops, and "least publishable unit" papers that contribute only a small increment. (You've read papers where you wondered, "Why did the reviewers accept this junk?" Your goal is to never have anyone say that about your papers!) If you publish too much, it will be too hard for the reader to find the pearls, and the reader may infer from the junk that all your work is junk. Fewer, high-impact papers is better than more, low-impact papers. *Never* publish the same material in different venues: although you will have a longer c.v., this is unethical and will backfire in the long run. Don't get discouraged by rejections: every researcher has many papers rejected. Learn from the reviews and improve your writing and research, but do re-submit.

When you travel (for a conference or even on vacation), try to give a talk about your research at nearby universities. (Even a not-so-nearby university might be convenient if you are already traveling.) If you don't know anyone at the university, ask your advisor to make an introduction or arrange for an invitation. Giving a talk is good practice for you, it makes your work more widely known (it is hard to overestimate the importance of this), and you will get valuable feedback. Before you visit, surf the university's webpages, determine whom you would like to talk to (either because you want to learn something from them or you want to tell them something, such as to make sure they know of your research), and email them directly to ask to meet during your visit (or, at the least, ask the host to put them on your schedule.)

Consider getting business cards. It may make you look (and feel) professional. I gave out essentially none on my job interviews but found them helpful at conferences for the year or two prior to that. However, today they are not much used, so there is no detriment to not having them.

Applying

Apply early! Everything should be submitted in December. The sooner your application arrives, the nearer the top of the stack it will be and the more opportunity there is for the hiring committee to see it before they are exhausted. Some schools set a deadlines earlier in December; these are generally not firm deadlines, but try to meet them if you can. Your application will be prejudiced if it arrives after December.

See my advice on writing a research statement.

Ask your friends for copies of their application materials; it helps to have an example to see what you do (or don't) want to do with yours. And, you should give them feedback. But don't look at their materials until after you have drafted your own. You don't want to bias yourself toward someone else's conception of an essay and lose out on what would have made yours stand out.

Mention your teaching experience if you have it.

Get good reference letters, including from people outside your area and outside your institution. You

may want or need to help them by telling them what to say or drafting the letter; at least offer any assistance they require. Delayed reference letters are the single biggest problem schools have with applications; ask for yours early, then keep reminding your references (without being a pest) until they are done, so your application is not held up waiting for them. Tell your references all the places you are visiting, so they can calibrate their letters (for instance, when writing letters for multiple people to the same place, they can put both in the best light). Don't blindside them with requests for additional letters later on.

Create a Google Sheets spreadsheet document that lists all the schools to which you are applying, and give your letter writers editing privileges. For each letter writer, have a column indicating whether they have submitted their letter; they fill in a cell when they submit a letter. This keeps you and them informed. If one letter-writer doesn't receive notification from a school but the others do, then that person knows to search his junk mail or take other action. It is also a subtle way for a letter writer to know they are holding up your application.

You may want to send "cold call" email asking whether a specific department is hiring and in what area. if you have a personal contact, you can also ask how to spin your application.

Put your application online, and send a reference to it to people you know in a department (as well as referencing it in your cover letter). Those people are your best way to make it past the recruiting committee, who will give you closer consideration after being asked by their colleagues and who might otherwise have accidentally overlooked your meritorious application among the hundreds they review.

Some recruiting committee members read the cover letter only to forward the packet to the appropriate faculty member, so keep it short and simple; here you can only hurt, not help, yourself. Some people customize cover letters (saying, for instance, "I would fill this niche in your department or could work well with X") and even research and teaching statements; I chose not to do that, because of the hassle and the dangers of erroneous cut-and-paste or offending someone by omitting that person's name, or saying I would complement someone who was changing areas or leaving the department. I wrote one application that sold *me* and let the department decide whether that was what they wanted. (If you are also applying to industry, then you should have slightly different application materials and probably resumes for the two types of job. Also see John Wilkes's talk ["Is work hell? Life in industrial research"](), and a [followup by Erik Reidel]().)

Many people are unsure of what to write in the teaching statement. Don't sound too narrow. Don't try to list the specific courses you can teach or have taught. Talk about why you love to teach and are eager to do it. Discuss your philosophy and what has worked well for you in the past. Talk about mentoring. Talk about synergies between teaching and research.

Setting up the interview

Do a practice interview. The best way to do this is to give a talk somewhere that is not an official interview. If you are lucky, your first interview will not be the place you want most to work. However, trying to arrange this is likely to backfire: you have little control over scheduling, and schools will will try to avoid getting scheduled too early if they sense you aren't really interested.

It's rude to interview someplace where you wouldn't accept a job offer. However, cast your net broadly and recognize that you will learn about a place by visiting it. I was surprised by what I learned on my trips, and my expectations were sometimes proven inaccurate (either by being too rosy or too gloomy).

Avoid scheduling interviews late in the season; by then, decisions may have already been made, everyone (including you) will be tired, etc.

When setting up the interview, I requested:

- a meeting with grad students.
  At most places, this is completely standard; at others, this request came as a surprise. (That was a bad sign.) You want the grad students' perspective, which I found often differed from that of the faculty; you want to know how grad students are really treated, for that tells you about departmental attitudes; and grad students may tell you things that the faculty, who are trying to put a positive spin on the place, might not reveal.
- a 15-30 minute break before the talk.
  Although I only needed about 10 minutes, I asked for 30 because of schedule slip. This should be in a room by yourself, so you can collect your thoughts, calm down, and flip through your slides one last time (which doesn't help the talk but is a calming ritual). This is more important than I realized. At the one place I didn't get this, my talk went very poorly, though I can't put my finger on exactly why, except maybe my unnecessarily heightened nerves. At another place I was given time but not a room; when I sat in the lounge or the seminar room, I couldn't escape people interested in chatting with me, so I excused myself to the bathroom and sat there for five minutes. The talk went great.
- a bottle or glass of water.
  Eventually I learned to bring my own bottle of water, because that detail was frequently forgotten.
- the talk being early in the visit.
  If the talk is late in the visit, then everyone you meet before that will want a precis of the talk, blowing 5-15 minutes during which you could otherwise have discussed more advanced material. Then those people will also be bored during the talk. Don't accept a 9:00am time: that happened to me once, practically no one showed, and I spent the next two days recapping the talk for people who missed it.
- to know how long the talk will be.
  Don't (plan to) run over 50-55 minutes even if you are allocated more time; audiences don't want to hear such a long talk. Some places will start 5 minutes after the scheduled hour; be prepared to shorten the talk if necessary.
- non-smoking hotel room (if that matters to you).
- food preferences or restrictions.
  Actually, I did not volunteer this information. Most places were considerate enough to ask about this; some did not.
- audiovisual needs, such as laptop sound or a laser pointer.
  I prefer to point at the screen with my hand — it's more dynamic — but if the screen would be out of reach, I asked for a laser pointer. It would have been better to bring my own, since not everyone will necessarily have one handy.
  I gave my talk using transparencies (permits reshuffling, less prone to problems than a laptop; it went very well). This perplexed some places, which were set up for electronic projection but didn't have an overhead projector on hand. Today, I would not recommend use of transparencies, even though they worked well for me in 2000. However, you should definitely have a copy of your talk on a memory stick and also on the web.
- requests for people on your schedule.
  I made almost no such requests, letting the school and those individuals would figure out that my interests were relevant and who should meet me. I also didn't want to inconvenience or annoy anyone who had other commitments or were not eager to see me. This was a mistake: you should name names and also send mail to those people saying you are looking forward to meeting with them. You want the widest possible exposure (someone who didn't meet with you can't advocate for you in the departmental hiring meeting), and they will (probably) appreciate that you thought of them.
- a copy of your schedule.
  This is important. Even if you can't get a final version, some version is really helpful before you leave on your trip. This lets you do background research so you don't seem clueless in interviews. I printed out the Web pages of everyone I was going to meet and read them on the plane on my way to the city. It's also good to have a record of whom you meet, for note-taking and for followup contacts.

Schedule breaks between your visits; you will be exhausted. I had two four-school, two-week trips (plus two three-day, one-school trips). By the end of one of the long trips, I found myself taking fewer notes and having less energy; my jokes during my talk got worse, and the talk became too rehearsed; worse of all, I stopped asking as many questions. The other trip was fine, because I had two three-day weekends with friends who pampered me. (On the first trip, I slept on friends' couches and the weekends weren't as relaxing. Don't make this mistake; spend the schools' money on a hotel for yourself, even if you are frugal or you think it would be fun to have more time with your friends. I was given this advice, but ignored it to my own detriment.)

Consider getting a loan from your advisor, parents, etc. to cover your costs while you are waiting for reimbursement; you might go several thousand dollars in the hole before getting paid back. A friend had lots of trouble with slow and inaccurate reimbursements; I kept careful track of my expenses, submitted them promptly, and had no problems.

The job talk

(Also see my advice on [giving a technical talk](#).)

The talk is very important; don't underestimate it. It counts for half or more of each faculty member's contact with you. A long talk is the kiss of death, so ask your host how long it is expected to be, but aim for no more than 50 minutes regardless.

The point of the talk is to convince people not in your area; those in your area are already convinced or you wouldn't have been invited for a visit. Your talk should convey three points: why the problem is interesting (why should the audience care?), why the problem is hard, and how you have solved it (and that you have solved it).

Your talk should clearly lay out where you will fit into the department. For example, don't try to disguise your core area by pretending to be working in some other, more trendy area. (It's fine to show that you can work broadly, however.) You probably won't have trouble convincing people of your technical accomplishments, but equally important is conveying why the results are important.

[Prepare well](#) for the talk; do multiple practice talks, and videotape yourself. A pre-practice talk in an empty room is a good idea but doesn't count unless you take it seriously and actually say every word you intend to say later. For your practice talks (there should be more than one), target people you know or who owe you a favor; don't broadcast multiple requests to the world. You should have been going to others' practice talks for years.

Do not overdo PowerPoint graphics, animations, clip art, background shading/coloring, fancy slide title or borders, etc. "Overdoing it" means even considering incorporating any of these elements, the punishment for which should be removal of the mousing hand. (I get compliments on my minimal slide layout; people find it refreshing, and they are able to pay attention to the content rather than the formatting.)

Pay attention to questions you get on the road, some one of which will be critical someplace. I improved my talk after my 4th and 5th visits, which were my first to top-4 departments. I hadn't really learned anything about the talk from previous visits, even to schools in the very next rank.

Different audiences have different styles. Your colloquium will be very interactive (completely question-driven) at some places, but completely dead, without any questions, at others. I greatly prefer the former. At my first interview, there were exactly two questions during the talk before I concluded. Both were, "Could you put that last slide back up," followed by 30 seconds of silence, followed by "Thank you." A good host will warn you what to expect (as my host did at that school).

In a research lab, the audience might well all be specialists in your field; but for an academic job talk, the audience will be much more mixed. Plan to have something for everyone.

I believe the entire talk should be clear and accessible to a bright computer scientist not in your area. This shows that you will be a good teacher, an important criterion that is frequently discussed in hiring meetings. It also shows that you are fully in command of, and can disseminate, your research results. Other people (with whom I disagree) argue that you should split the talk into: 15 minutes accessible to everyone; 15 minutes accessible to half; and 5-10 minutes that only a few understand. They argue that it is bad if everyone understands your entire talk: you seem too shallow. The problem statement needs to be clear, but the solution need not be (show a few equations); naturally, you do need to show that you nailed the solution.

A helpful but perhaps unreasonable piece of advice: write the dissertation first. Whichever you do first will help the other, and you care a lot more about the talk than the dissertation.

Seem excited. If you don't care about your research, why on earth should anyone else? Remind yourself of the excitement you have felt about it, even if you are now sick of it. If you're ordinarily laid-back and low-key even when you really care, pump up the emotional volume so you seem dynamic and interested.

Individual meetings

Expect a difference in salesmanship (whether you are selling to them or vice versa) at differently-ranked schools, and sometimes even between the first and second days of a visit. For me, it was most noticeable at the top 4 departments vs. all the others, but it could also have had to do with genuine collegiality and friendliness.

You will have to work hard to manage your time; schedule slip is endemic. (It is tolerated and even expected to an extent — it shows people are eager to keep talking with you — but too much throws off everyone's schedule and is annoying.) Figure out a subtle way to look at your watch, and about 5-10 minutes overtime, suggest that you would love to keep talking but don't want to keep your next appointment waiting. My record was pretty good: I only missed one appointment by running over by more than half an hour, and that was on my first interview. I know of other people who had much bigger problems.

If anyone (you or the department) fouls up your schedule, *you* are the one who gets hurt. Thus, you are responsible for yourself. I had places give me wrong directions, fail to reserve hotel rooms, and more. (One place even told me they didn't give me an offer because of concerns that I hadn't sufficiently explained the relationship between my work and another field. During my talk and meetings, they hadn't bothered to ask about that! Other places I visited remarked on how well I had nailed that issue.) That is why you have to manage your time, your energy, the scheduling of your visit, and more. Don't depend on others.

Take notes as you go (there are usually a few minutes during the day available to do so). This helps you remember, and you can then intelligently follow up with individuals you met and remember your reactions of the day. There will be so many people that by the end of the first day of your 10th interview, you will be able to remember little of the people you saw that day and nothing of the ones from previous days.

Examples of questions I was asked:

- What do you intend to do next? What is your research plan?
  This was the most frequent question, even though it was clearly laid out in my research statement. Do not expect busy professors to actually read the entire packet, even if it is distributed to them; they just don't have the time. You need to have spent some time thinking about this before writing your research statement, which should have included a section on this.
- What will you be doing in 10 years?
- Give me a summary of your work.

This happened before my talk or for people who missed the talk. In general, you should have a prepared answer (sometimes called an "elevator talk") at a number of granularities — 30 seconds, 2 minutes, 5 minutes, 50 minutes (that being your talk) — so you can take advantage of any opportunity to publicize your work, such as being in an elevator with someone you've always wanted the ear of.

- Who do you consider the best people in your field?
  This might have been because I'm in software engineering, which doesn't get much respect academically.
- What is your biggest weakness as a teacher?
- How can your results help me in my own research?
  This may indicate a desire for collaboration. More negatively, it might indicate a failure to grasp the implications of your research or disinterest in your field.
- What are you looking for in a school? Why did you apply here?
  This was pretty common, especially toward the end of the visit after I had sold myself.
- What is your methodology for problem-solving?
- What are other people at your current institution doing?
  This might also be phrased as a question about a specific person. Don't show that you are a hermit unaware of the rest of your department; be knowledgeable about what is going on.
- What is the most interesting part of computer science besides your own area?
- What are your hobbies or interests?
  This was most common at dinner; they would then try to convince me that the locality was a great place to pursue those activities.

It is illegal for prospective employers to ask about marital status or other personal issues like potential two-body problems; however, I was asked multiple times at every place I visited (I wasn't wearing a wedding ring). I believe they were asking at least in part in the hope that they could help by seeing what the department could do for my S.O. However, they were always visibly happy when I said that I was unattached, for that indicates that I had no external constraints, fewer distractions from work, and no history of having spent a lot of time on such distractions in the past.

When talking with people, interrupt and ask questions — don't just sit back and be low-key and passive. Definitely don't talk all the time; you need to shut up and let them talk and spill the beans. This is true both at dinner and otherwise. Definitely don't talk about what you don't know, don't try to snow your interlocutor, don't gossip, and don't put anyone down. If you do any of these things, word will certainly get back.

I asked both generic questions (that I repeated at every school) and specific ones targeted to the institution, based on rumors or knowledge I had about it. I am told that some interviewers found me too aggressive when I asked thoughtful, direct questions about relevant issues. A different strategy would be to separate your sales of yourself from your assessment of the department, leaving the latter for later. I didn't want to make extra visits for that and I wanted to see how people reacted to my questions. You are being judged on your questions as well as your answers, and you probably don't want to accept a job anyplace so insecure that it resents this (as I found one place did).

Some example of my generic questions are:

- Why did you choose this school above your other offers? Why do you remain at this school rather than moving elsewhere?
- You must have expected many things about this place before you accepted the job offer. What was your biggest surprise once you arrived?
- How would you compare this school to other top (or comparable) schools?
  Amusingly, I got the same answer every place that I visited. They all claimed to be more collaborative than average, and most of them claimed to have a better community and/or a more democratic hierarchy. For some places, this indicated I was being lied to or that the faculty were completely blind to the actual situation.
- What would you change about the department, if you had the power? What is being done about

those issues?
- What is the department's vision for the future? How does it see itself positioned (with respect to the field or to other departments)? What areas are priorities for expansion?
  More bluntly, you could ask "What are you looking for in a candidate?"
- How is the chair chosen?
- Tell me about your work.
  You need to seem to be interested in other fields than your own, and when people get to talk, they inevitably come away with a good feeling that the silent party is a wonderful conversationalist.
- Do graduate students have a voice in departmental governance?
- How are junior faculty treated? What is the department's recent tenure record?
  I didn't ask this question, because there is no sensible way to compare it across institutions. There are very small numbers at each institution, and few places compare the number of people hired to those who are tenured. (The percentage of people denied tenure will be much smaller, but other junior faculty will have been advised to leave or will have left on their own.)
- How many hours do you work, and what do you do outside work?

A few people thought I was asking questions that were too trite and pre-rehearsed. (I could criticize the questions I was asked on the same grounds!) I usually didn't have a specific agenda in mind. I mostly wanted to get them talking and to find out what they considered the important or interesting issues, what their values were, and so forth.

I am often asked what to wear to a job interview. I wore a suit, because dressing up demonstrates your professionalism, indicates that you take the interview seriously, and shows respect for the people you are meeting. On the other hand, other people have garnered job offers while wearing more casual attire. In the end, it's about your personal style. Wear something comfortable enough that you can concentrate on the interview itself.

After the interview

The interviews were truly fun, exciting, and stimulating; I had a wonderful time talking about my research, seeing people's faces light up when they heard my ideas or understood their consequences, getting feedback, and learning both how other departments run and what research is going on there. I made some great professional contacts with whom I expect to collaborate. What's more, I actually wrote three papers in between my interviews. (You should not expect to get any work done then, and I might not have if I didn't have deadlines hanging over me.) I also followed up on unanswered questions and sent a quick email thanking people for suggestions or good conversations.

By contrast, the post-interview process was unpleasant, particularly the waiting. (During the wait, you will get lots of privileged information about your chances. Try not to pay too much attention to it; I found much of it to be false and still don't know whether I was lied to and led on, there was a breakdown of communication, or some other factors changed the situation.) A good way to forget about it is to get really involved in other work, like research or your dissertation. Also, take advantage of your friends, family, and advisor for support. You deserve it, and that makes the decision-making and waiting much easier.

As soon as I knew that I was not interested in a school, I called them and told them so. (I did not do this by email, and I tried to call everyone I liked there in the space of half an hour. It's much nicer to use a personal touch here, for it softens the blow.) Other people argue that you should hold on to your offers (or to potential offers if you haven't yet heard from places), because it might offend them for you to decline them, or you might be able to play them off one another to get a better package. You should keep live any offers you are serious about, but it is exceedingly inconsiderate to make schools waste time and energy fretting over a moot decision. Also, there may be other candidates who liked the place but who can't be made an offer until you decline or withdraw. You'll get a lot

more points for being a decent human being, playing straight with people, and considering others' feelings than you will get in expanded ego or salary when you make people wait for you. Remember that these people will be your colleagues for years to come; don't burn any bridges.

Don't get depressed by offers that you don't get. Schools don't judge purely on merit, but have other criteria as well. (This is not unlike your own decision, which will factor in the department's quality, reputation, and collegiality, along with the surrounding area and other issues that reflect on more than just the people you met.) As one example, several schools told me that their first priority was networking, and they put me on hold in favor of candidates in that field. Regardless of the absolute strength of the candidates (which is impossible to perfectly quantify anyway), those people offered certain expertise that I lacked, but that didn't reflect on me.

Even an excellent candidate may have a difficult time getting offers from top schools. One reason is that, the top schools rarely make more offers than they have slots available. (This is due to high yield, high standards, and less worry about whether a slot will carry over to the next year.) They sometimes extend a very late offer after a rejection, but at a late date it may be hard to get buy-in from all the relevant parties. Another reason is that in certain years, there are one or two very hot candidates who get offers at multiple top schools; this effectively uses up many of the offers from top schools.

Pool information with others if you can. I had mixed success with this: some of my fellow job-seekers were happy to share offers, inside info about schools, etc., while others didn't want to cooperate, despite my offers to do so. (You may want to watch out for those people, though my analysis is that even if you are hurt a little by your generosity with them, that's better than becoming a suspicious and ungenerous person yourself.) Remember, the department chairs collude against the candidates (for instance, by agreeing on starting salaries); you are only protecting yourself, and the shared information can really help.

There is little room for negotiating on salary, but much more ability to negotiate non-salary aspects of the job. Your goal is to have an environment where you will be happy and successful. For instance, you may wish not to have the burden of fundraising during your initial years. In negotiating your academic startup package, you are generally the ally of the chairman in seeking to get money from the dean.

One perk to negotiate is a semester of teaching release sometime before you get tenure. Far too many new professors squander this time off during their first semester. You won't get much done during that first semester anyway (despite your best intentions!), and you will delay the benefits of exposure to the students — letting them know about you and your research interests.

Consider doing a postdoc before, or even after, receiving an offer. This will delay your start as a faculty member by a year, but it also exposes you to new ideas and people. A postdoc before your job search is primarily useful for enhancing your record and permitting you to get a better job if your publication record is thin (say, you have just started to get results from your thesis research).

In making your decision, you will be forced to compromise something: geographical preference, opportunities outside work, quality of colleagues or students, etc. Recognizing this doesn't make the choice any easier but does help you cope with it and make a clearer decision about what matters to you. Good luck!

Back to Advice compiled by Michael Ernst.

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