WHAT IS THIS?

I wrote this text following my experience in the North American academic job market, specifically in computer science. My goal is to share some knowledge about the job search process, bits of advice that I received from others, and my personal experiences and hard-earned wisdom (read: my stupid mistakes). Hopefully, this can help candidates who (like me) go into the process knowing very little about it.

I'm a Theoretical Computer Scientist, so this text is written from the perspective of a theorist. But I believe that the text can be useful for candidates in computer science at large, and maybe more broadly in STEM.

The text isn't meant to be a standalone. Before starting the job search, I personally benefited greatly from reading Kira Goldner's fantastic text, as well as from texts by Nikhil Garg, Baris Kasikci, and Shomir Wilson (all referenced in Kira Goldner's text). I'd advise the reader to think of the current text as a follow-up to theirs. The guides by Stanford CDC and by CMU "emigration" are also relevant, and the Stanford guide seems to be intended for a broader academic audience.

Disclaimer. I'm not qualified to give a lot of advice: I've been through the process once, and as a candidate. Therefore much of the text is written using "I statements", even when my purpose is to suggest courses of action. Moreover, any advice that I share or suggest is necessarily very personal and subjective; see Oded Goldreich's "advice to aspiring scientists" for a broader take on offering advice in academia.

Apology. Most of this text was written in the days immediately after I concluded my job search. So please forgive some (mild) level of snark and jadedness; it might be best to approach the text with a tiny bit of amusement.

Roei Tell, May 2023

TABLE OF CONTENTS

1 Process management

Prepare six work months, $5-10K, and good walking shoes.

A little help from friends, mentors, colleagues, family, and fridges.

Collaborating with your so-called competition against the real challenge.

A gendered issue: Hardball negotiations under impostor syndrome.

Working through chaos.

2 Strategies

The process, step-by-step.

Timelines, deadlines, and having a very limited strategy-space.

Not sharing information with people you don't know very well.

3 Pre-interviews

Nobody knows what they're doing.

Prepare answers to these questions.

4 Happy visits: The visit days

The visits were extremely important for me.

The latest fashion trends for men in academic computer science interviews.

Who's on whose side here, anyway?

Having fun and speed-dating researchers.

Notebooks, and knowing what to ask.

Teleporting between buildings, never stopping at a bathroom.

5 Negotiation

Your adversary is your one true friend (surely it's a quote from somewhere).

Broken half-promises that will not break your heart.

"But dad told me I'm allowed": Negotiating with stronger entities.

Obfuscating finances, academia version.

Growing up from a researcher to a small-scale entrepreneur.

Appendices

1. PROCESS MANAGEMENT

1.1 Prepare six work months, $5-10K, and good walking shoes.

The walking shoes are obvious - you're going to be walking *a lot*, in North America and particularly in the East Coast, in January-March. There's going to be snow. Optimize functionality over aesthetics (see more below on what to wear).

As for the $5-10K, many departments asked that I book my own flights, and they reimbursed my expenses after a month or two (also reimbursing Lyfts, trains, etc.). My expenses were high, and I was down almost $10K at some point. This is partially because I traveled from the West Coast to the East Coast, to Canada and to Europe, and used Lyft often. Also, this is a time with incredible stress, and there were frivolous expenses. Did you hear about those high-powered CEOs blowing $10K on booze in a night of partying? So, I spent $15 once on a masala dosa that I didn't really *need*.

Six months is my personal estimate of the aggregated work time involved, for someone (like me) who applied to 40 places and to a few backup postdoc positions. It includes looking up open positions and deciding where to apply, preparing dozens of application packages (you'll need multiple versions, e.g. 2-page, 3-page, 4-page, 7-page, etc.), preparing the job talk and revising it several times along the way, virtual pre-interviews, travel and visit days in departments, getting ready for each pre-interview and in-person interview, negotiating offers, making decisions, and logistically managing this process. Also, my work capacity was far from maximal, because I needed to manage the excess stress, emotionally and in my relationships.

The best strategy IMO is *not* to clear six consecutive months off of your schedule. The best strategy is to spread the work over nine months, or in other words *start preparing early* - start writing your materials and preparing the slides for your job talk in July. In Appendix A (there's an appendix!) I shared highlights from my personal timeline, and you'll see that most of my work was done by mid-April.

1.2 A little help from friends, mentors, colleagues, family, and fridges.

The job search is an extremely challenging process, physically and mentally. To me it felt like a long, rolling personal emergency. It also takes a staggering amount of work, recursing deeply with Hofstadter's law. And unfortunately, it was hard to explain the challenges to anybody who hasn't personally gone through it; to cite my beloved teenage relatives, "nobody really *understood* me". So receiving support from my non-academic friends was less straightforward than I expected.

The flip side is that academics who have already gone through this process understood *extremely well* what I was going through. It was easy for me to get support within academia: Whether it's slightly more senior friends, or top people in my field, academics have been generously available, had quick response times, and offered lots of encouragement, support, and advice. And everyone has been just a little bit forgiving of my selfishness during this time. So my advice would be to ask for a lot of help from fellow academics who understand what you're going through.

Also, if you have children, you're going to need a strategy. You are going to be away, physically and mentally, and also completely spent, for months. I've been told by friends that it's unreasonable to stick your kids in the fridge for six months (*I was just asking! sheesh*). Also, your ever-supporting partner/s won't be able to shoulder the load by themselves for such a long time, let alone that they are also going to be very involved in the job search and in decision-making. Parents? Friends? Communal arrangements with other colleagues in the job market? Hired help? Good luck.

1.3 Collaborating with your so-called competition against the real challenge.

To be a bit tongue in cheek: Those damn universities are conspiring and strategizing against you poor candidates, so you should find colleagues that you trust, and exchange information. Dates, interview invitations, strategies, offers, deadlines, salaries, and emotional support from the only other people who are willing to talk endlessly about this. It's that meme with the fish: Don't panic, organize.

(To be clear, my phrasing about conspiracies is hyperbolic and tongue-in-cheek, but the point is serious: Candidates are vulnerable, embarrassingly inexperienced in the process, and facing a large power differential. Compensate by collaborating.)

Now look, I get it - the candidates that you know best are exactly the ones competing with you. But they're probably also really nice people that you already like and trust, and they need you just as you need them during this time. For me personally, I lost nothing by sharing, and gained a ton of information, support, and advice. In retrospect, I wish I'd connected with some of my colleagues sooner.

I personally shared information in a bilateral and confidential way with a small number of postdocs that I knew and trusted. I never shared my job talk or application materials, but I did share - in real-time - all of my pre-interview and interview invitations, all offers including their deadlines, and the full details of negotiations (salaries, startup funds, immigration support, etc.). I discovered quite a few interesting things in these conversations.

1.4 <u>A gendered issue:</u> Hardball negotiations under impostor syndrome.

I'm hardly an authority about the particular difficulties that academia poses to women, and more generally to people who aren't cis men. So let me hide behind my wife's back, who insisted that I put this part down in writing.

There was a lot of freewheeling, swashbuckling, fake-confidence hardball negotiation involved in certain parts of my job market process. For me personally, it was necessary to secure certain things that I needed. But it meant firmly insisting on my requests, zig-zagging between places to improve my position, and facing pushback: Annoyed and impatient responses, exasperated sighs, and people telling me that my requests are unreasonable and can't possibly be met (usually a week or so before a miracle solution was found). There's a section about negotiation below.

Needless to say, I don't have the skill-set needed to do such things, and I disliked that part of the process. My academic, collaborative, and math-heavy career prepared me for other challenges. But I believe that it might've been even harder for me to fake the confidence and negotiation skills, had I not been socialized as a cis man.

So, to the women (and non-cismen, more generally) reading this: I'm sure I can't tell you which strategies would work best for you to polish this skill-set in advance. (Psyching yourself up? Enlisting your startup-founder friend? Practicing?) But I can tell you that *this is a challenge coming up ahead, and you should be prepared*.

1.5 <u>Working</u> through chaos.

Let me say this as clearly as possible in advance - *please don't count on working as usual throughout your job search*. For me, and for everyone I know, it was strictly, *physically* impossible to maintain anywhere near our usual research agenda. This is both due to the actual workload of the job search, and due to the excess stress. Also, in terms of priorities, the job search is infinitely more important and urgent for you than writing another paper during December - April.

On the other hand, there's a gap between "working less than usual" and "not working at all". Also, six months is a long time, and it's likely that you'll have at least *some* commitments that you must meet: Deadlines of projects with collaborators, students approaching for advice/feedback, reviews you already committed to, etc.

My personal feeling is that the question of working during the job search is a bit of an explosive topic, with people having strong opinions about it. I don't have a strong opinion, and all choices seem very valid to me. Here's where I stand:

1. My top priority was keeping myself physically and emotionally safe, and any discussion of working during the job search was geared towards this priority. If not working for a few months is what you need, and your circumstances allow it, the choice sounds great to me. People that I know and respect didn't work, and I urge you not to blame yourself or to feel like you're alone in this choice.

2. For me *personally,* continuously maintaining a little bit of my research agenda throughout the job search was good for my mental health. It's *nice* to prove a lemma and write a paper, I like it. And it kept me grounded in the months-upon-months of travel, job talks, wearing a silly jacket, negotiating with chairs, and looking up neighborhoods in cities I've never heard of.

To be clear, I am *not* saying "publish or perish", or "work yourself to death". I'm saying that it was nice *for me* to have a foot still in research, while my body was on airplanes.

2. STRATEGIES

2.1 The process, step-by-step.

The process in every place I interviewed at was essentially the same.

1. Submitting my materials online, and contacting people I know in the department to inform them that I applied and am interested.
2. A virtual pre-interview (which was skipped in some places).
3. An invitation to come for an in-person visit in the department, in which I gave a job talk and met many people.
4. After an internal vote in the department, I got a happy phone call notifying me of an upcoming offer and asking if I'm interested, and what I need.
5. A formal offer was sent to me by email, and then there were back-and-forth negotiations about it for a couple of weeks (with further revisions sent).

(Needless to say, some processes stopped at an early stage, such as not being invited to an interview or not getting an offer!)

The non-trivial challenge is doing dozens of those simultaneously, each with its own timeline. My wife and I used several shared spreadsheets for keeping track, and I recommend setting up spreadsheets - with ample redundancy - early in the process.

2.2 Timelines, deadlines, and having a very limited strategy-space.

One senior academic described the process to me as an "ant game", where the candidate is the ant: Running around helplessly on the ground wearing a silly jacket, having a very limited strategy-space to make choices. They had a point, but I still believe there are a couple of things under the candidate's control.

The first and most important thing is scheduling. Scheduling is important because there are deadlines. To explain this in more detail, consider an ideal world, in which all universities interview all candidates as a first step, and after that there's an efficient matching mechanism that optimizes everybody's valuation functions. The North American job market works very differently: Each university works by its own

unique timeline, and many universities place *deadlines* on their offers, irrespective of other universities' schedules. I know of three types of deadline:

1. A deadline to decide within a week, early in the process. I personally wasn't faced with such a deadline. The goal, as far as I understand, is to pressure the candidate to accept, by denying them options and placing them under extreme stress. When this is indeed the goal, it's an immoral act.
2. A deadline to decide within several weeks (say, three or four). I received several such deadlines, and they seem to be very common in general. Take into account that offers you'll receive are likely to come with such deadlines.
3. Deadlines that are relatively early, and known well in advance (e.g., known at the pre-interview stage). I had one such deadline, and as far as I know it's not a very common practice. Since the deadline was known in advance, it gave me a fair chance to arrange my schedule and interview in other places in time.

The deadlines that I received (of the second and third type) were negotiable a little bit, when there was a good reason. Usually I could buy a week or two, when there was an explanation, but no more. What I could mostly do is try to schedule interviews well, in a way that optimizes the following measures:

- Being interviewed by all important places before important deadlines. This is obvious, and for me it depended *a lot* on the willingness of universities to schedule early interviews and reach early decisions. Universities that were interested in hiring me made a significant effort on this front.
- Leave blank spaces in your schedule, so that you have slots to schedule your top choices when you'll (inevitably) be facing deadlines. This is important. Also, as Kira Goldner advised, please remember to schedule rest days; personally, I needed rest days *before* interviews rather than after.
- Don't schedule important places very late - even if there are no deadline issues. Following my *eighth* visit (specifically) I was exhausted, a bit sick from travel and a stress-suppressed immune system, and already cynical about the whole process. That's not how I wanted to come to my ninth visit, which was important to me. (Fortunately, folks there were understanding. Also, somehow by my tenth visit I was rejuvenated; I'm not sure how that works.) Lastly,

maybe it's nice not to put your top choices first, because you want a bit of practice; personally, I'm not sure if this is crucial.

- Try to have at least two offers simultaneously, for negotiation purposes. To understand why this is so important, read the part about negotiation below.

The second thing in the ant's strategy-space is to clarify to universities that the university is *important* and *high-priority* for the candidate-ant. This can be done with *words*, i.e. just say "You are one of my top choices"; I personally advise honesty here, so prepare a rich array of phrases of varying strengths. And it can also be done with *actions*, i.e. by preparing carefully for pre-interviews and interviews.

For example, in a pre-interview, when asked "What are your teaching goals?", don't say "I love teaching!", but answer with a specific plan that's tailored to the particular place - "I want to teach Course 2:456 with Prof. Squirrel, revive Course 2:283 that hasn't been offered since 2012, and introduce a new grad course about computational otters". When asked if you want to live in the area, don't answer "I love living!" - talk about your first-hand knowledge and experience of the area, your family's needs, your personal plans, etc. (Yes, this takes work. Prioritize.)

2.3 <u>Not sharing information</u> with people you don't know very well.

I regret sharing too much information with departments, early in my process. I learned my lesson the hard way, and after that, I only shared very high-level facts (until I got an offer): I have other offers from undisclosed places, I'm still interviewing, I have a deadline that's important to me at date so-and-so.

Example 1. I had an offer with an early deadline from a place that I really liked, and I was asking other universities to adjust their schedule (i.e., interview me and reach a decision before that deadline). One university pressured me to know where the deadline is from, and when I told them, they were insulted that I would even take such a "second tier place" (sic) seriously compared to them, and reversed their position about adjusting their schedule to decide in time. In another university, again I told them and asked them to decide in time, and they almost gave up on recruiting me in face of the strong competition; I had to convince them that I'm still serious.

To my best judgment, all three places were of extremely similar academic level. (Whatever that means.) Therefore, I personally had *no feasible way* to foresee these polar and extreme responses. That is why, in retrospect, I would've never shared this information. And later on, when people from other universities asked me "So, which other places do you have offers from?", I responded by "I'd rather not share this information, unless it's really crucial for some reason". Sometimes people asked again, and I had to push back, but my insistence was always respected after that.

(After getting an offer, in the negotiation phase with the chair, I shared information a bit more freely, and it worked well; see the part about negotiations below.)

3. PRE-INTERVIEWS

3.1 Nobody knows what they're doing.

Pre-interviews are still relatively new in my professional community, and there don't seem to be strong norms around them. I had extremely varied experiences, even when I tried to ask for information in advance (most responses were non-informative, a-la "we just intend to ask you some questions about your research and plans").

In my first pre-interview, people chit-chatted, showed me their dog (it was amazing), and asked how serious I am about joining. In my second pre-interview, they asked me about my specific plans for research, teaching and mentoring, for the time frames of 1, 2, 5, and 20 years (each of the topics, each of the time frames) as well as about my plans for promoting equity and diversity in their university specifically. (Needless to say, I embarrassed myself on that one by being woefully unprepared.)

My advice, as long as the norms around this aren't well-established, is to prepare for an overly formal and serious pre-interview. Don't expect to get the dog.

(My personal take on pre-interviews: As a candidate, I liked them and they were useful for me. Pre-interviews gave me some time to feel more comfortable with the relevant people, and an initial feel for the department, well ahead of the visit.)

3.2 Prepare answers to these questions.

In Appendix B (there are *two* appendices!) I listed many questions that I remember being asked in pre-interviews, and that I suggest you prepare answers to. Don't slack - I was actually asked *each and every one* of those questions, usually multiple times. If some of them look ridiculous to you, well, don't ask them when you're the one conducting the pre-interview; but for now, prepare answers.

4. HAPPY VISITS: THE VISIT DAYS

4.1 The visits were extremely important for me

... but not for the reason I initially thought they'd be. There's a debate about whether or not the visit even matters to the department. The extreme view, which one person shared with me during a visit, is that "things are determined before the candidate's foot hits the ground". I don't believe that this is strictly true (you can definitely still screw up!), but there's something to it. Anyway, this is not what I want to talk about.

What I want to say is that the visits were *extremely important for me*, rather than for the department. This is because I *got to know the department* and the theory group. My original top choice became less appealing for me personally after my visit. My visit to U of T is what made me so excited about it. Admittedly, most places were kind-of what I expected (i.e., they were great!), but that's also valuable information.

Are you the sort of person who enjoys competition and success, maybe peppered with some healthy elbowing? Would you feel comfortable in a department that sits together every day, listens to everybody's feelings, and votes on the location of office plants? What's more important to you - guaranteed backup in case your funding runs out, or full independence to use your funds as you wish? Are you a pure theorist who wants to work in the basement on circuit lower bounds for thirty years, or do you want the theory group to march into the engineering building and design algorithms for the applications of rich biologists? Do you prefer to work in a huge department where you'll be a cog in a strong machine, or to join a small up-and-coming place where you can leave your mark? What are your *actual* feelings and hopes about stuff like teaching and outreach - holy mission or nuisance?

I'm asking these questions because different departments have wildly different *cultures*, and I found those out *only after I visited*. I literally had no clue in advance. Also, a devil's advocate might say that one can ignore the department and group culture, fly solo and do their own thing. Maybe. I don't believe that I personally can.

(For the record, my own answers: Ambitious and driven collaboration, no elbowing required; backup in case funding runs out; basement, circuit lower bounds, bring snacks; big machine, influential cog; I care about teaching and outreach.)

4.2 The latest fashion trends for men in academic computer science interviews.

Or, as one colleague defined it, the most important question. I'm giving up in advance: I know that there is *literally nothing* I can say that will convince you of the truth, which is that this is not important at all. You should wear basic respectable clothes, as in any job interview, but the imaginary dress code with suits and ties is an obsession of candidates, not of the faculty members who interview them. (Have you *seen* the way most people in computer science departments dress? If your answer is "huh, I never really noticed in the last decade", pause and ponder that for a second.)

Anyway, I know it's a lost battle, so my goal is just to minimize the *time* you spend on this. I can only advise men, and even that very poorly, but here goes: The full guide on how to minimize the time to basically one afternoon. Buy decent walking shoes - like in *Shawshank Redemption*, nobody will notice your shoes and you'll need to walk a lot. Buy a jacket that is suit-like; you don't need an actual suit, just a jacket that looks respectable. Men's jackets are extremely easy to buy, and they fit well with no fuss. If you like wearing a buttoned-down shirt beneath it, great; but any nice-looking shirt beneath it would also be perfectly good. A new and respectable-looking pair of jeans is more than fine, but if you want to go with dress pants, knock yourself out.

That's basically it, you can't go wrong unless you really violate common sense. I'm assuming that you won't be going to your job talk in your PJs. On the other extreme, if you wear overly fancy formal clothes, nothing bad will happen either.

Caveat: Needless to say, I can't speak for the experiences of people other than men in this context. I know that it might be more complicated than "buy a jacket".

4.3 Who's on whose side here, anyway?

Obviously, everything is always an interview: From the conversations with the very young assistant professor working in your sub-area to the meeting with the Dean. So is dinner with wine - you're being interviewed while sloppily eating and drinking, it's

interview on boss mode. (By the way, I very rarely drank wine or other alcoholic drinks, and that's a valid choice. Nobody ever pressured.) But still, there are shades.

The hiring committee: Its role changes across places. In some places, they just select candidates for interviews, and then return to their day jobs. Unless I'm wrong, in several places the committee stayed heavily involved until the end, and were even the ones voting on candidates in the end (instead of, say, the entire department). In most places, I interacted mostly with the theory person in the hiring committee.

The host: This is usually the person whose research interests are closest to yours, and they've been tasked with organizing the visit itself (schedule, harassing people to sign up for meeting you, etc.). Of course, when interacting with them you're still interviewing, but at the very least they're invested in making the visit a success (they organized it); and more often than not, they advocated for you behind the scenes, and want you to be hired. I almost always asked to talk with my host before the visit - by phone, Zoom, or email - and they gave me tips on the job talk (questions during the talk or in the end?), shared departmental politics (Prof. Dobermann barks but never bites), and answered questions relevant to researchers in my specific area.

The group: In some places, when I arrived, the theory group already knew my work and decided to back hiring me. In other places, part of my job was to impress the theory group. I usually tried to ask ahead (e.g., by asking my host or people that I knew). Meeting people from the theory group during the visit was usually fun and useful. You don't need my advice on how to interact with your own group - these are your colleagues, you can always talk about your research and ask about theirs.

The Other People: All of my meetings with people outside my research area were slightly awkward, and quite light on content, but almost all of them were also great fun. I got to hear about cool things happening very far from theory, and I got to meet people without much pressure to impress them. (Yes yes, the 5-minute pitch about my research was "surely" very important for the overall impression I left on them.)

The hidden hiring committee member: Sometimes one of The Other People turned out to be a member of the hiring committee. I don't know if that meant anything, and I learned of their secret identities by coincidence. They didn't wear spy hats.

The chair: This is an important meeting. I got information about the tenure process, teaching load, funding students, departmental plans, etc. (see below the part about questions to ask). Faculty members can share their knowledge and experience, but the chair is the one in charge. Also, I was often asked about offers, timelines, how seriously I'm interested in the university, and so on. Quite a few times, I was asked directly about my spouse; I'm told that this is illegal, but it was common. In some places, even early issues of negotiation came up (but this was rare, and always needed to be brought up again later on in the negotiation phase).

The Dean: Nobody could explain to me very well why I met Deans. In principle, Deans can affect (and even veto) hiring decisions by the department, but I understand that this is very rare. Moreover, the meetings rarely had meaningful content that would lead to such a thing - I was asked about my research a little bit and at a high level, got long-term career advice, learned about the faculty and the university. Anyway, the meetings were usually very nice - Deans have excellent people skills.

So what's missing? You might notice that I left out the super-stressful interviews where I was grilled about my research plans in full technical detail, asked whether my work is trivialized by the Bontz-Schmontz theory of hyperbolic ferbulations, and was explicitly challenged to a battle-of-wits to demonstrate my impressive ability in solving research problems on-the-spot. These kinds of things never happened to me, and they aren't suitable for visit days: They would harm the ability of both sides (department and candidate) to assess whether the match is good. Let alone that 30-minute meetings aren't an appropriate format for an in-depth technical talk.

(Ok, there was actually one meeting with an explicit "To assess your candidacy, let's see if you can solve this open problem I've been thinking about on the spot!", and I suspect that it happened mostly because the interviewer Zoomed in remotely while being very sick. In contrast, naturally occurring research questions popped up often, and talking about them with colleagues was part of the fun.)

4.4 Having fun and speed-dating researchers.

As much as the visit-days looked horrifying at first - 14 consecutive hours of interviews! - and as much as they were exhausting, they were also really fun. Almost invariably, I enjoyed my visit days, even though I'm not a big extrovert.

I met hundreds of nice people, and almost all of them had interesting things to say (about themselves, their research, or my research) or to ask (about me, my research, or my plans). Most people I met were also very kind and considerate, actively trying to make me feel comfortable. Some people even offered tasty treats (*I remember each and every one of you kind, kind souls)*.

Also, some people understood my research a bit, or honestly wanted to; needless to say, these were super-fun (and non-taxing) meetings, and I learned a lot (e.g., about how to present my research and explain it). As I mentioned above, actual research questions popped up from time to time. Other people attacked my research area during the meeting, and this was also easy and non-taxing to handle. (You'll be well-prepared at this point, and attacks on your research won't be any threat.)

There were also other meetings. As Kira Goldner noted, the main challenge is filling voids in conversation. It sounds mundane, but it can be taxing, especially when there are many meetings with awkward silences and you want to make a good impression (I'm interested and curious about the department!). At some point, after my 12th meeting of the day, I really did ask all the questions that I could imagine; I know everything I can hope to learn in one day about the department. The person I'm meeting builds robots for a living, might not be in the mood to explain their research to yet-another candidate, and doesn't care so much about theory (it's ok! nobody's perfect!). Preparing in advance was the key to filling awkward silences.

One meeting opened with the person saying, "Hey, nice to meet you. So what do you want to ask me about the department?", and then staring at me in silence. There were still 29.8 minutes left to fill at that point. Fortunately, I had questions.

4.5 Notebooks, and knowing what to ask.

A good friend advised me to bring a physical notebook with me to interview days - perfect advice. First, because I needed to prepare information on everybody I was meeting (what do they do? where do they come from? what do I want to ask them?), so I had it written in my notebook for real-time reference. And secondly, because I needed to quickly write down important information that people gave me, before I was scurried off to the next meeting and forgot everything.

In Appendix C (ok, maybe three appendices is too much) I listed some questions that I prepared in advance to ask faculty members on visit days. I usually had to ask the same question several times (i.e., ask it in several different meetings). Some of them are concrete and informative (e.g., how is the student-funding model here?), whereas others are meant to just get people talking a bit, and learn about the department's vibe (that's really important). Towards every visit, my notebook had a general list of questions, and targeted lists of questions intended for each person I met with.

4.6 Teleporting between buildings, never stopping at a bathroom.

It's a cliche joke that visit-days don't leave time for bathroom breaks. It's also true. My usual visit schedule looked like this:

- 9:00-9:30 Meeting the chair in building A, room 314
- 9:30-10:00 Meeting the Dean in building B, room 159
- 10:00-10:15 Preparation for the job talk in building A, room 265
- 10:15-11:15 Job talk in building A, room 358
- 11:15-11:45 Meeting Prof. Dobermann in building B, room 979
- 11:45-13:00 Lunch with Prof. Goat, restaurant four streets away
- 13:00-13:30 Meeting Prof. Squirrel in building A, room 323
- … (and so on until the dinner ends at night)

The keen-eyed reader might have noticed that the university assumes very efficient modes of transportation, excellent time management with nobody in charge of it, and candidates who never need a minute to catch their breath. This is not unique: It was like that in every place I visited. It comes from extremely good intentions - the

host organizing your visit wants everybody to know you and be impressed by you, and vice versa. You're only there for a day or two, and you'll need to make life decisions afterwards. (See above, under "visits are extremely important".)

On my first visit, at some point I raised my voice at a poor staff member and decreed "I NEED TO USE THE BATHROOM *NOW please*", and thus I was granted bathroom privileges. (My bathroom-break-requests were waved off twice in earlier meetings that day, by very nice people who had "just one more thing to add".) On my second visit, entering one of the last interviews of the day, I mustered my most assertive voice and said firmly "Excuse me! I do need to use the bathroom for a moment, so please hold on!" (and was answered by a magnanimous "Of course! [open arm waving] We have so many good bathrooms at our wonderful university!"; I laughed).

Before my visit at U of T, they sent a tentative schedule that had a lot of gaps between meetings, and even breaks. I asked my wife, in all seriousness, if she thinks they might not really want to consider hiring me. (Fortunately, they completely filled my tentative schedule a day later! No bathroom breaks.)

I learned to ask assertively and early on for breaks - not only for bathroom or phone breaks (you'll be getting important emails from university A *while* interviewing at university B), but also just for staring out the window to remind myself which city I'm in. This depended on learning to care less about being very late for everything.

One last tip: All this teleporting usually didn't leave much time for me to actually look around. In later interviews, I asked my host in advance to schedule some time and show me around the department - the corridors, the area with offices of theory faculty, the PhD student offices, the undergrad lecture halls, the downstairs coffee shop. When thinking about visits later, these strolls remained firmly in my mind.

5. NEGOTIATING

5.1 Your adversary is your one true friend (surely it's a quote from somewhere).

The department and/or hiring committee *already voted*. It's *done*. They *want* to hire you. Now you're working with the chair, and it's literally their *job* to hire you. Of course, you don't *have* to negotiate, especially if the initial offer already has all the main things that you want. But I encourage you not to give up in advance on things that are important for you or for your family: Now is the time to try and get them.

During one visit, a very senior academic explained the process to me as follows: The chair is going to make angry and frustrated faces at your unreasonable requests, but in truth the chair wants you to get what you want, and just be hired already; what they *really need* from you is ammunition, so that they can go to the Dean (or to the Provost) and *argue why* the university needs to give the candidate these things. This explanation - which is not mine! - is very consistent with my personal experience.

The best ammunition that worked for me is "Another place gave X to me" - that *always* worked, like magic (more on that below). Another ammunition was *how* other universities were able to resolve problems - which creative formal mechanisms they used to give me X. Another ammunition (with partial success) was family constraints - explaining the family reasons why I won't be able to come without X.

I also want to repeat Kira Goldner's fantastic advice: Work *with* the chair, not against them; explain *why* you need things, rather than blankly insist. Similarly to her experience, in some places the startup was too low to fund certain things that I wanted, and just asking to increase it wasn't useful; but once I explained exactly *why* I needed specific things, chairs found wonderful mechanisms to make them happen. (For example: "Oh, a *workshop?* That's no problem! We can't increase your startup funds for that, but there's this cross-departmental institution that's partially funded by the department, so we can transfer more funds to that institution and earmark it for a workshop that you're organizing". I would've never thought to ask that.)

5.2 Broken half-promises that will not break your heart.

Maybe, like me, you repeatedly heard the advice “don’t believe anything until you get it in writing from the chair”. That’s very good advice, in my experience. I was half-promised things that were crucial for me - “sure, this sounds very easy, I believe there’ll be no problem for us to do it” - only to later on receive a strict “Nope, no way”, when it came down to actual commitments.

This was not uncommon, and it happened with good people that I like and respect. It’s important to emphasize that I believe it was never malice or deceit: Chairs have Deans and Provosts above them, and work in big and complicated systems that I personally don’t understand well. I believe that in many cases they were facing unexpected external constraints and pressures.

There was one early instance where I took an important broken half-promise to heart, and after that I learned my lesson and played the game, as follows.

5.3 “But dad told me I’m allowed”: Negotiating with stronger entities.

If you chose to negotiate, and there is something important to you that you haven’t been able to get, here is a useful tool. Go to department A, tell them “I need X”. They give you X/2. Go to department B, tell them that department A gave you X/2. They give you 2X/3. Now go back to department A, tell them that department B gave you 2X/3. Voila, you got X. Finalize by going back to B, now you have X from both offers.

Sounds ugly, crude, childish? I know. It definitely felt like that to me in real-time. In fact, I think that many people feel like that, and yet are forced to play this game: The candidates who are doing it; the department chairs who are negotiating against offers from other departments; and the many people who advise candidates that competing offers would be the most effective negotiation tool in their toolbox.

I wouldn’t necessarily advise going overboard with this, but please consider giving yourself permission to do it for specific things that are important to you.

(Disclaimer: I didn’t need to do this at U of T. They addressed my concerns early on, and opened higher than what I expected. I was very grateful for it.)

5.4 Obfuscating finances, academia version.

In my experience, there are three components to startup funds: Support for funding PhD students; summer salaries for you (in the US); and additional funds intended to cover everything else (equipment, travel, visitors, professional events, etc.). The first two are measured in units (e.g., 4 student-years and 4 summer salaries), and the third is measured in currency (e.g., total of $300K).

The challenge is that universities sometimes present all three components bundled as a lump sum, so that it's hard to tell what is actually being offered. Moreover, some universities inflate the sum of the PhD student support component, by calculating it based on what it would've cost you to fund students for the same time had you paid from NSF grants (of which the university takes a large overhead). As a computer scientist, my instinct is to ask whether one can recurse with imaginary overhead on top of imaginary overhead, in order to inflate the sum up to a billion dollars startup. (Now, can you do it in parallel? How many rounds do we need to get to 2^{128}?)

Whenever I asked, chairs were very forthcoming in de-obfuscating the calculations, explaining precisely what is actually being offered. I'm guessing that it's not the chairs who are responsible for the misleading numbers.

5.5 Growing up from a researcher to a small-scale entrepreneur.

In the middle of the season I found myself saying, with a straight face, "Yeah, I'm going to need $650,000 for my plans". In the end of the season I found myself actually believing it, too. It's a quick process of growing up, from a researcher to (effectively) an entrepreneur managing a small but well-funded research group.

Maybe some disciplines prepare people well for this - senior PhDs or postdocs get experience managing teams, grants, and budgets. I wouldn't know: In theoretical computer science, at least where I grew up, there wasn't even a hint of that. The job search - and specifically, the negotiation phase of it - was the first time I met the reality of the change in my job, and started planning budgets and grants and groups.

My advice: Prepare a detailed, itemized startup plan. I know that you have no idea how to do it. Ask a slightly more senior friend (that's what I did). And another piece of

advice - many people told me that startup funds are the absolute easiest thing to negotiate, and that it'll matter a lot in my first few years. The first half perfectly matches my experience, at least as a theorist whose startup request is comparatively small anyway. (As for the second half - TBD, give me some time.)

APPENDICES

APPENDIX A: SOME HIGHLIGHTS FROM MY PERSONAL TIMELINE

- October 26: Sent initial versions of my materials to letter-writers
  (This is very late. It burdened my letter-writers with a rushed schedule for writing, and supplied them with unpolished materials. Do better.)
- November 7-22: Sent out 40 applications with accompanying emails
- December 12: First pre-interview in North America
- January 19: First in-person interview in Europe
- January 23: First formal offer in Europe
- February 1: First in-person interview in North America
- Late February: First informal offer in North America
  (This is the "happy phone call" I mentioned above: The chair notifying that the department voted to make an offer, and starting negotiations.)
- Early March: First formal offer in North America
- Late March: First rigid deadline in North America
- Late May: Finalized

Let me also describe my timeline at U of T in a self-contained way. I notified U of T in advance of my expected late March deadline, and visited for an interview in early March. Prior to the deadline, I received a written informal offer by email, which included full offer details (this followed several negotiation conversations by phone). In mid-April the formal offer letter was sent, and I was still waiting for one additional part to be sent as a separate addendum. That addendum was sent in early May, and the last stretch of time was related to sorting out the precise start-date.

APPENDIX B: QUESTIONS THAT I WAS ASKED IN PRE-INTERVIEWS

When I was initially looking at lists of questions for pre-interviews, the lists seemed too long, and I just waved it off with "eh, surely it'll be ok" and didn't prepare well. It turns out that these were all actual questions and that I should've prepared better.

So here's a list of questions I was personally asked. Indeed, hammering in the point: I was *actually asked* all these questions, most of them many times. My advice in

preparing your answers is to start with short and broad high-level statements, but follow-up with detailed plans. For example, when asked about teaching, it's OK to open with "I love teaching", but the substance of your answer is the detailed plan that follows. (E.g., "I want to teach three undergrad courses, joining rotation in your 424 and 584 and 203; two grad courses in theory, in particular reviving 582 which hasn't been taught for a decade; and I intend to develop a new grad course about recursive ostriches, here's my idea for syllabus and format".)

Research

- Tell us about yourself / tell us about your work (a 5-minute overview of yourself and/or your research).
- What is your most important research contribution, and why is it important?
- What are the practical implications of what you do?
- What are the effects of what you do on computer science at large? What does it build / break / create? What are the broader effects on society?
- Give intuition to your technical ideas, how are they different from what was done before, and what in them allowed obtaining breakthroughs.
- Is what you do really new/innovative? Was it not thought about before?
- Many actual detailed questions about your research. (These are the easiest to answer, coming from people who actually want to understand.)

Mentoring, building a research group, funding

- What sort of group do you plan to have? What is its planned size, how many PhDs and/or postdocs?
- How would you obtain funding for a group of that size, specifically? Name specific grants and timelines for applying and for getting funded.
- How will your proposal materials to grant X look? What will be the topic, title, main objective, concrete deliverables of your grant proposal?
- How would you recruit PhD students?
- What is your approach to advising and mentoring PhD students? What is your relevant experience?
- What are your plans for undergrad mentoring?

Teaching

- What is your teaching experience?
- What are your goals in teaching?
- I see that you don't have teaching experience in setting X (say, teaching broad undergrad classes), how would you go about teaching in an X setting?
- What is your teaching philosophy? What is your personal plan for developing as a teacher?
- Which courses will you teach here?
- Which formats will your graduate courses have?
- Which pedagogical methods, educational tools, and technology will you use in undergrad courses?

Future research agenda

- What immediate projects will you give a PhD student tomorrow?
- What is your research plan for 1 year? For 5 years? For 10 years? For 20 years
- What is your long-term research goal/vision?
- What are your favorite current open problems (big ones and/or tractable ones)? How do you plan to solve them?
- What will you do if/when your current research field fizzles out? What will you do after you solve the big open problem?

DEI (diversity, equity, inclusion)

- What are your plans to contribute on DEI issues, specifically at our university?
- What is your philosophy and approach on DEI issues?
- What are your views on DEI in US higher education (specifically), which pressing issues need to be addressed and how?

The university itself

- Why do you want to work here specifically?
- Which specific people do you hope to collaborate with in the department, and in other departments in the university?
- What will you contribute to our department?

- What is important to you in a department?
- How high is our university in your list of priorities?

HR-style personality questions

- What are your strengths and weaknesses? (To the reader: Sigh all you want, I was asked this question twice.)
- Tell us about a conflict you had with a supervisor, administrator, or colleague, and how you resolved the conflict. (I was asked this thrice.)

Do you have any questions for us?

My approach was a balancing act: On the one hand I wanted to demonstrate my interest, but on the other hand it's premature. So I usually asked a little bit -- things that were important for me at that stage -- then said something like "I have a lot of questions, but maybe it's a bit premature; in case the department will be interested in further process, there are many more things I'd want to know, if that's OK".

Don't forget to ask about things you really care about and/or are concerned about. Now is the time. And a great (and relevant) question to ask is always "Can I ask what is your timeline for the next steps in the hiring process?"

APPENDIX C: QUESTIONS THAT I ASKED IN VISITS

- High-level structure: How many semesters are there at the university, and what are their approximate dates each year? Which other departments/colleges/schools are there that are interested in computer science, and what are the interfaces and differences between them? How many faculty members are in the department? How many undergrad and grad students are in the department?
- Plans for the department and group: Are there plans to expand the theory group, and if so in which areas/directions? Are there “holes” in specific areas that you’re looking to fill right now? Is there an expansion of the department right now, and if so what is the goal (e.g., target number of people)? Is there an expansion in other departments/colleges/schools that interface with CS?

- Tenure: What is the tenure process here, and what are the criteria? How many people were denied tenure in the last 10-20 years, and what happened in each case? How many people "quietly left" before their tenure process started?
  (Note: All the answers I received were tiny variations around "*We aim for each and every new faculty member to get tenure, we never hire more than one person for a slot, and we do our utmost best to support each faculty member on their way to tenure*". I'd be very wary of any other answer. There was one place where one person answered a bit differently - emphasizing that tenure is non-obvious - and they went to great lengths to fix that impression later.)
- Teaching: What is the teaching load per year/semester? What are the typical sizes of classes/sections? How much freedom does a faculty member have to experiment with content or format in graduate courses? Are there particular courses you'd want a faculty member like me to teach?
- PhD students: How does the application and acceptance process work? Are students assigned to advisors from the get-go or only after (say) a year? Is there a period of "advisor-shopping"? Where do students usually come from (e.g., undergrads in the university, other places in North America, Europe, India, China, etc.) and why do students choose to come here specifically? How long does a PhD usually last, and how common are extensions?
- Postdocs: Are there any "departmental" postdocs that are funded by the department/group rather than by a particular faculty member? How are the postdocs selected, funded, and supported while they're here?
- Grants and funding: How much does it cost to fund a PhD student / postdoc per year/semester? Who funds PhD students during their first year (advisor/group/department)? Is there any backup option in case I have a gap year in my funding? Are there enough TA positions for every student who's interested in it? How many people apply for CAREER/Sloan each year, what is the success rate, and what support can the department provide (e.g., training in writing grants, administrative staff skilled at preparing budgets, etc.)?
- Undergrad mentoring: Is there any program for undergrads to conduct research projects with faculty members? Are these programs credit-based,

and is there a standard application process? What can I expect from undergrads who apply to such programs in terms of investment?

- Outreach and DEI: Which outreach projects is the department involved in? What are the current DEI goals, and what is being done to promote them? Which current projects are there that I can be involved in?
- Living in the area: In which neighborhoods do faculty members (and specifically, the theory people) live? How do they commute? Which other options are there? What are the financial challenges when living in the area? Is there any support from the university for buying a house (e.g., a low-interest loan or a shared equity program)?
- To young faculty members: What made you decide to come here? What were you surprised about when arriving/starting? What are the differences between here and previous places you've been to (during your PhD/postdoc)?
- To senior faculty members: What was the department like "back then"? How has the department changed over the years? What is better/worse compared to the past? Which trends concern you, going forward?
- To PhD students: What can you tell me about life here in the department? How is the atmosphere? What do you like here? Why did you choose to come here specifically? Which weekly events are there for the theory group (seminars, reading groups, etc.)? How often do you come to your offices? Is the stipend enough to survive in the city? Do you like TAing? What do you do during the summer? Is there a way for you to interact with the department leadership to share needs or concerns that you have?