

FINDING THE RIGHT JOB

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CRA-W

Computing Research Association
Women

On the job market or planning to be on the job market

- What career path options are available?
- What do employers value? What do you value?
- What goes into a job application?
- What should you expect during an interview?
- What are you supposed to do after the interview?
- If you are lucky enough to have multiple offers, how do you choose between them?
- What is “negotiation” and what can it do for you?
- What can you do to start preparing?

What are you looking for?

- What kind(s) of position are you looking for?
 - Research University? Liberal arts college? Post-Doc? Teaching position at a research university?
- What type of environment do you want to work in?
 - Small or big department? Join an established research group or start one?
- Where are you willing to live?
 - West coast? East coast? Midwest? South? Urban? Rural? International?

Types of Colleges/Universities

Type	Degree Program	Emphasis	Important
Research Universities	Ph.D.	Research	Teaching and Service
Colleges/Universities	M.S.	Teaching	Research & Service
Selective Liberal Arts Colleges	B.S., B.A.	Teaching & Scholarship	Service & Research
Undergraduate Oriented	B.S., B.A.	Teaching & Service	Research

Example of Different Expectations

- **Research Institutions**
 - 60% - 80% Research
 - 10% - 35% Teaching
 - 5% - 10% Service
- **M.S./B.S. College or Teaching focused at R1:**
 - 50% - 80% Teaching
 - 10% - 30% Professional Development
 - 10% - 20% Service

Different Academic Positions within an institution and Expectations

- **Professorial Ranks**
 - Assistant
 - Associate
 - Full
 - Distinguished/Chaired/Endowed Professor
- **Instructor** – Teaching and Service
- **Lecturer** – Teaching
- **Postdoctoral Positions** - Research

Research University: Research Expectations

- **Publications** – journals, conferences (focus on top peer-reviewed venues)
- **Funding** to support research groups and summer salary
- **Graduate student training** (and their professional success)
- **Reputation and impact**
 - Higher in rank: more visibility and international reputation – invited talks, conference organization, journal/editorial boards, professional organization roles.
- **Maybe:**
 - MS/Undergraduate research mentoring
 - Patents, software artifacts, etc

Research University: Teaching

- Teaching Load: typically 1:1 to 1:2
- Mix of undergraduate and graduate courses
- Courses: intro undergraduate up through core graduate course, seminar in research area
- Teaching assistants for grading, office hours, and overall help

Teaching Position

What types are out there?

- Teaching at a small college
 - Professor (assistant, associate, full) with tenure
 - Lecturer
- Teaching track at Research University
 - Many different types/titles
 - Teaching Professor
 - Professor of the Practice, Clinical Professor, Lecturer with SOE (CA)
 - Few with tenure, most on contracts
 - Lecturer, Senior Lecturer

Teaching Position Expectations

- Teach 2-4 classes per semester
- Innovation in educational practices
- Have busy office hours
- Heavy advising
- Teach out of your specific area
- Involve undergraduates in research projects
- Serve on campus committees (department, college, university)

Teaching Position

Research

- Fewer institutional resources
- No graduate RAs
- **Get undergraduates involved**
 - Distributed Research Experience for Undergraduates
 - Collaborative Research Experiences for undergraduates
 - REU through NSF
 - Local programs at undergraduate institution

Teaching Position Rewards

- Close relationship with undergraduates
- Be a member of the university culture
- Chance for leadership and influence
- **Matches beliefs/lifestyle**
 - Teaching is a gift and you want to share it with others
 - Possibly less travel
 - Flexible schedule for families

Teaching Position Challenges

- Perception that less prestigious than research focused/university
- Salary: possibly lower?
- Intense focus on students
- Staying engaged in research
- Infrastructure (e.g., computer services, grant administration)
- Small department

Post-Docs

- Training opportunity, an opportunity to strengthen your research
- Transitional period into another career path.
- Funded by a Fellowship you apply for OR university/department OR professor's research grant
- Best case scenario: 2 years, good mentor, high-ranked school that will help you transition to a long-term job of your dreams

Some Post-doc Motivations

- Timing: graduate “off season”, two-body issues, difficult job year
- Improve job opportunities: strengthen research, work in a highly regarded institution
- Learn new area/field
- Work with a specific expert: additional mentoring
- Experience different type of university

Good Post-Doc Position Offers:

- Mentoring and guidance that directly supports professional development
- Significant opportunities to explore independent research topics
- Enhancing the breadth of your research

Post-Docs Challenges

- Low pay (compared to faculty, industry)
- Role in the University
 - Not a student, but not faculty
 - Depending on institution, can feel isolated
- May not have independence
 - Working on PI's grant
- If you have family, can be difficult to move from a temp position

Application Process

Where to Apply

- Identify “stretch”, “eye-level”, and “safety” departments
- Check ads: CRA, CACM, IEEE Computer, departmental websites
- Certain research areas can match the hiring goals for more than one department (e.g., CS, ECE)
- Keep an open mind! You might be surprised what you end up liking the best

Your Application

- Cover Letter
- Curriculum Vitae (CV)
- Research Statement (2-3 pages)
- Teaching Statement (1-2 pages)
 - What is your teaching philosophy?
 - What are some of the methods of teaching you use? And how do they facilitate student learning?
 - How do you create an engaging or enriching environment?
 - What activities do you use to promote student motivation and learning?
- Letters of recommendation (3-5 people)

Identifying Letter Writers

- Letters are very important
- With your advisor, choose people who are
 - Familiar with your research
 - Respected in the academic community
 - Expected to write a meaningful and positive letter
- Consider (in addition to your advisor)
 - Members of your research community
 - Internship advisors
 - Members of your dissertation committee
 - Other professors at your institution
- Give letter writers a copy of your application material

The Selection Process

- Expect to use an application website
- Some departments ask for letters for all applicants, others only for the selected ones.
- Some departments will let you know that there is a “no match,” but often you will not hear anything
- Few applicants will be invited for an interview
 - Telephone/video interviews are becoming more common



Congrats!
You've got an interview!

Typical Academic Interview

- ~2 days
- The interview talk (preferably early, not at the end)
- 30 minute one-on-ones
- Meet with department head/chair and Dean
- Meet with a small group of students

One-on-One

- Do your homework – understand the organization and the interviewers!
 - Know the research areas and accomplishments of the people you will meet; prepare questions for them.
- A two-way evaluation
 - Show interviewers that you'd be the kind of person they'd want down the hall
 - Don't let them do all the talking. **THEY NEED TO REMEMBER YOU.**

Preparing your Job Talk

- Provide enough background so people outside your area of research can follow
- Clearly state the problem and identify your specific contributions
- Show you understand any limitations of your approach and/or your results
- Thank your collaborators
- Include future research ideas and interests

Tips

- Get input from your advisor
- Give practice talks to a wider audience at your institution
- Consider any feedback you get
- Get the audience to ask questions, even weird ones, and to play difficult personalities
- Video your talk and (gulp!) watch it
- Practice, Practice, Practice
- Have a backup copy of your talk

The Big Day(s)

- Don't set up a crazy travel schedule
- Get plenty of sleep, eat healthy, and wear comfortable clothes
- Try to imagine yourself in the environment
- Enjoy and have fun!

Tips

- Be enthusiastic! Show passion about something
- Interpersonal skills are important
- Always tell the truth
- Remember that you are representing your advisor, your department, your university
- Consider when or where to mention any two-body challenges

Questions you will be asked

- What is your vision for the field?
- What was your novel insight and/or long-lasting scientific contribution of your thesis work?
- What do you want to work on next and why?
- Why are you interested in this institution?
- What courses would you like to teach and why?
What courses are you willing to teach?
- What is your philosophy about teaching students?
- Do you have questions for me?

Questions You Should Ask

- What's the best thing about the department?
- How are departmental decisions made?
- Are faculty encouraged to collaborate with each other?
- What type of jobs do graduates take?
- How is interdisciplinary research viewed?
- How is collaborative research viewed?
- What is the teaching load? What opportunities exist for faculty to “buy out” of courses?
- How are teaching assignments made?
- How much control would I have over course content?
- What flexibility do faculty have in creating new courses?
- How will I be evaluated? What is the tenure process?
- What resources are available for improving teaching skills?
- How is teaching evaluated?
- Do junior faculty have a mentor? How is it selected?

After the Interview

- Evaluate how it went – revise your materials if necessary
- Talk to your advisor
- Follow up with anything you said you would do
- **File for travel reimbursements promptly**
 - Read the instructions carefully and keep copies of receipts
 - Send notes thanking people you particularly enjoyed talking to
 - Okay to contact the chair/lead if you have another offer



Offer!



Negotiate the Offer

Negotiating the Offer

- **Starting date and time till tenure**
 - A January start *may* buy you extra time on the tenure clock
 - Tenure clock issues (clock credit, clock stoppage)
 - Pre-tenure sabbatical?
- **Teaching**
 - Teaching load reduction
 - 1st year teaching assignment
- **Money**
 - Salary
 - Start-up package: travel funds, summer salary, equipment, lab and student space
 - Subsidized housing, moving expenses
 - Campus parking, child care facilities/cost
- **Other**
 - Committee reduction
 - Help with obtaining an H1-B visa (if you're non-US)

Negotiating Rules

- If you never hear “no”, you're not asking for enough
- But know when not to apply this rule



Job Search in ~2 years?
What to do now?

Job Search in ~2 years? What to do now?

- Publish great work!!
- Keep a list of potential future research ideas
- Figure out if you want a research focused or teaching focused position
- Cultivate your professional network: conferences, seminars, mentors ... meet people
- Communications skills matter: writing, speaking!



Job Search – Closer to Getting Out

Job Search – Closer to Getting Out

- Prepare CV and research/teaching statements
- Get these materials reviewed
- Talk to advisor/other faculty where to apply
- Apply to several places
- Prepare/Practice interview talk
- Be assertive!



GOOD LUCK!

Resources

- J. Wing's "Tips on the Interview Process"
<http://www.cs.cmu.edu/afs/cs/usr/wing/www/talks/tips.pdf>
- CRA's Taulbee Survey
<http://cra.org/resources/taulbee-survey/>
- CRA-W Career Mentoring Workshops:
<http://www.cra-w.org/ArticleDetails/tabid/77/ArticleID/50/Career-Mentoring-Workshop-CMW.aspx>
- On Academic Life:
<http://blogs.scientificamerican.com/guest-blog/2013/07/21/the-awesomest-7-year-postdoc-or-how-i-learned-to-stop-worrying-and-love-the-tenure-track-faculty-life/>
<http://dynamicceology.wordpress.com/2014/02/04/you-do-not-need-to-work-80-hours-a-week-to-succeed-in-academia/>

Resources (cont'd)

- On Post-Docs:

http://cra.org/resources/bp-view/best_practices_memo_computer_science_postdocs_best_practices/

- Tips on doing an academic job search:

<http://matt.might.net/articles/advice-for-academic-job-hunt/>

<http://people.mills.edu/spertus/job-search/job.html>

<https://homes.cs.washington.edu/~mernst/advice/academic-job.html>

- Job Ads:

<http://cra.org/ads/>

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