

## Academic Job Hunting and You: Tips, Ideas and Guidelines

A key first question is: what are your career goals? For instance, do you want a job with mostly (or all) research, mostly (or all) teaching, or a mix? Is industry the ideal place for you?

- a. If you aren't sure, talk to your advisor, recent graduates and other faculty about what each option might be like.
- b. Talk to your advisor about what is realistic, given your talents and trajectory.
- c. Make a plan that will make you as attractive as possible, given this goal.

### 1. Where to Look:

- a. Mathjobs.org: <http://www.mathjobs.org/jobs>
- b. ASA JobWeb: <http://www.amstat.org/jobweb/index.cfm>
- c. AMS EIMS: <http://www.ams.org/profession/employment-services/eims/eims-home>
- d. European Mathematical Society: <http://www.euro-math-soc.eu/european-advertisements>
- e. Higher Ed Jobs: [higherjobs.com](http://higherjobs.com) – includes some smaller positions that are missed by the larger sites.
- f. ACM Job Center: [http://jobs.acm.org/home/index.cfm?site\\_id=1603](http://jobs.acm.org/home/index.cfm?site_id=1603)
- g. Chronicle Vitae: [https://chroniclevitae.com/job\\_search/new?cid=UCHESIDENAV1](https://chroniclevitae.com/job_search/new?cid=UCHESIDENAV1)
- h. Notable Math Jobs Wiki: [http://notable.math.ucdavis.edu/wiki/Mathematics\\_Jobs\\_Wiki](http://notable.math.ucdavis.edu/wiki/Mathematics_Jobs_Wiki) – do not obsess about the rumor mill, use this as a list of open jobs.
- i. Professional Mailing Lists:  
<http://www.zaik.uni-koeln.de/AFS/publications/dmanet/index.html.en>, [optimization-society@list.informs.org](mailto:optimization-society@list.informs.org); [informs-students@list.informs.org](mailto:informs-students@list.informs.org); [computing-society@list.informs.org](mailto:computing-society@list.informs.org); [SIAM-OPT@siam.org](mailto:SIAM-OPT@siam.org)
- j. University Jobs Boards: <http://www.stat.ufl.edu/jobs/>; <http://www.stat.purdue.edu/resources/jobs/>; <https://www.stat.washington.edu/jobs/>

### 2. Documents:

#### General Thoughts About Documents:

- i. Readability and correctness is key for all of your documents! Seek-and-destroy all typos.
- ii. The purpose of your documents is to highlight your strengths and experiences. Their goal is to *get you a phone interview or a face-to-face meeting with potential employers.*

- iii. Good statements are a balancing act: not too long, not too short; the right mix of braggadocio and humility; accessible to the mathematical layman, but impressive to the area experts.
  - iv. There are frequently up to 600 (or more) applicants for a tenure track job, so in order to make a medium list of 10-30 applicants, you need to “pop” off of the page.
  - v. The only way to make em’ right is to revise, revise, revise. This will be a theme. ☺  
Bother as many faculty and peers to read your documents as you can!
  - vi. For those jobs that are particularly interesting to you or seem like an especially good fit, take the time to update your documents. Incorporate words from the job posting into your cover letter and statements. Make sure that your strengths and experiences that fit the job are in your documents and easy to spot in your CV.
- a. Curriculum Vitae (CV)
- i. **Must:** Basic Contact Info
  - ii. **Must:** Education (but not necessarily GPA).
  - iii. **Must:** Current/Previous Positions
  - iv. **Must:** Awards (if applicable).
    - a. Put all awards in context - if that helps.
    - b. Don’t assume everyone knows what your fellowship/paper award means (“The First Annual Montgomery Burns Award for Outstanding Achievement in the Field of Excellence”) – tell them what you won it for!
  - v. **Must:** Publications, Submitted papers, papers in preparation
    - a. Could include “where submitted” or “where will be submitted”, but that is of dubious value.
    - b. Be careful of what you mean by “in preparation”.
    - c. Make these separate subsections! Otherwise, it can appear that you’re trying to inflate your application.
  - vi. **Must:** Teaching Experience. List courses taught, and indicate when you had full course responsibility.
  - vii. **Must:** External presentations (indicate invited, if applicable). It is generally considered poor form to list job talks.
  - viii. **Must:** Other service (refereeing, discipline-based community service, department committees, club work)
  - ix. *Maybe:* Local talks.
  - x. *Maybe:* Professional memberships.
- b. The Research Statement

- i. This is a place for you to share your math, but it is also a writing sample! Always keep that in mind.
  - ii. Start with a broad pitch for your large area, written for a mathematical, but perhaps not research active/interested audience.
  - iii. Transition into your narrower area, with a clear description of why your focus/work is “important” enough for them to care about.
  - iv. Summarize your results and their contribution to the field (as outlined above).
    - a. Keep (i)-(iii) relatively short, and spend your “jargon points” wisely. Not every department has an expert in your area.
    - b. “This was hard to do, and you should care that I did it.” Is a good message here.
    - c. “I am not an illiterate slob” is also a good message. (See NO TYPOS, above).
  - v. Next, outline each project/paper in more detail. While you still want this part to be well written, this should be mostly for the knowledgeable. This does not mean you should write too much here.
  - vi. Make sure there is *actual math* in your research statement. For all that the beginning should be readable and clear, the rest of the statement should demonstrate your mathematical maturity, technical communication skills and most importantly the heft of your work. (“This was hard to do, and you should care that I did it.”)
  - vii. Finish off with a “future research” statement. This can be a couple of sentences or a paragraph. For research positions, it’s nice to see that the applicants have thoughts and ideas for what they will do next.
- c. The Teaching Statement
- i. A teaching statement generally starts with an overview of your teaching philosophy. If you don’t think you have one of those, we should talk. I bet you do.
  - ii. Throughout your teaching statement, try to avoid being too opinionated about certain techniques and their effectiveness. If someone reading the statement feels like their methods are being impugned, that can be enough to keep you off of a short list.
  - iii. *Optional:* Briefly outline 1-2 courses you taught that exemplify your philosophy. Give specific examples of activities/techniques/class happenings that emphasize your approach and skill.
    - a. One note here. Some of you have sole course responsibility – that should be mentioned here somewhere. It can make you stand out.
    - b. If you have used any nontraditional teaching techniques – mention that.

- iv. As strange as it may sound, include a brief graduate teaching and/or mentoring strategy. What would you do differently when teaching graduate courses? Are you comfortable as a possible graduate mentor, and what might your general approach be.
  - v. Do you do anything else with regards to your teaching? Peer mentoring? Work in schools? Train zoo animals? Write about it, as passionately *as is accurate!*
  - vi. Remember, key message: "I am not an illiterate slob".
  - vii. There are several things you can include, either in the statement or in a supplemental document.
    - a. FCQ Summaries (massaged to make you look as good as possible).
    - b. Selected student comments.
    - c. Selected comments from faculty observations.
    - d. A link to (impeccable, error free, and innovative) teaching materials on your website.
- d. Cover Letters
- i. You have 1 page, including a university header (makes it look nice) and signature. Hit the highlights, not your "love of cats".
  - ii. Good things to mention include:
    - a. A 1-2 sentence research theme and/or explanation of your big results.
    - b. Number of published papers and top venue names.
    - c. Summary of classroom teaching experience.
    - d. Any special teaching activities, briefly (outreach, teacher preparation, significant use of inquiry, flipped classrooms, other significant techniques).

### Other things to do this summer/next year (Time Permitting):

1. Create a (nice) website, especially if you have already submitted papers and started giving talks.
  - a. Identify places where you might want to improve your profile.
  - b. Post your statements there when they are ready.
  - c. Talk slides and preprints are also great.
  
2. If the research is done, don't sit on it!
  - a. Talk to your advisor – what is the long-term strategy for your project? You may not have a say in how something gets put into the world, but you should know if there is some plan for your work.
  - b. If you have no papers submitted, you will have trouble “proving your worth” to many programs – not just research focused ones.
  - c. Depending on field, papers can take 1-2 *years* to get accepted, so don't delay!
  
3. If you have results, talk about them!
  - a. Start small – local seminars, small meetings (SIAM Student meetings, MAA, Discrete Math Days, etc.)
  - b. Poster sessions are a great way to work on your “elevator pitch”.
  - c. Get lots of feedback from peers and faculty.
  - d. Think about different audiences
    - i. “If this was a talk for mostly experts, I would...”
    - ii. “If this was an undergraduate-accessible talk, I would...”
    - iii. “How could I **sell my area, and specifically my work**, to non-expert (but mathematically literate) faculty?”
    - iv. When thinking about a job talk, find the right mix of accessible, smart, and (in the last 10 minutes) facemeltingly brilliant. (“This was hard to do, and you should care that I did it because I am now making it clear that you couldn't have.”)
  
4. If it is feasible, you have time, and it won't hurt your principal research – branch out!
  - i. Write (good) papers on different topics.
  - ii. Try to write a paper without your advisor (if they are cool with that).
  - iii. Start building your professional network! Make an effort to meet smart peers (at your home institution or elsewhere) and kick problems around with them. It may not result in a paper, but it could lay the groundwork for future work.

- iv. A strong reference letter from a distinguished faculty member that is not at your home institution is valuable, because it is viewed as more independent.
  - v. Ask your advisor if they can send refereeing opportunities your way.
5. Think about your teaching:
- i. Have you taught a reasonable variety of courses? It is just fine if these courses are at the 1000-2000 level only, but 8 semesters of college algebra isn't the best way to sell yourself.
  - ii. Keep student praise, if possible.
  - iii. Think about who will write your teaching letter. Get observed!
  - iv. Pursue other teaching opportunities *if they are something you care about*. Indifferent teaching as a resume builder is deceptive and at best borderline irresponsible.
  - v. If you have the opportunity, and are interested, be a peer mentor.
  - vi. Do you have a *graduate* teaching philosophy?
6. Graduating next year? Write first and second drafts of your statements this summer.
- i. You should expect to revise/rework your statements 5-10 times.
  - ii. Work together with other imminent job seekers.
    - 1. Get advice and input from students outside of your field.
    - 2. Most academic jobs have 100-600 applicants, so while you may be applying to the same places, don't act like you are "competing" with each other.
  - iii. The length of a good statement can vary, but don't blather - accentuate your strengths and uniqueness.
7. Think about who you want to ask to write your references. It's nice to have people to comment on different aspects of your application and most applications specifically require a letter that addresses teaching. If there is something you'd like your reference to focus on in their letter, ask them. For instance, you may ask Prof. X to please mention how you taught courses X1 and X2. Also be aware that you may be compared (directly or via letter quality/enthusiasm) to other people that the professor is writing for – including their own students.