

# Professional Development Notes: Professor Alex Mogilner

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Disclaimer: Mogilner only knows what is needed to apply for an R1 or teaching/research position. He doesn't know how to apply for teaching colleges, talk to others in the department to learn how to do this.

## There are 4 main things needed for your job application:

- 1) CV: You're always sending/uploading your CV.
  - a. It shouldn't be artificially puffed up. Don't add a lot of insignificant stuff to make it 10 pages. Also, drop stuff as you get older and it's not as significant
  - b. LIST of PUBLICATIONS is CRUCIAL:
    - i. Different areas of science have different standards. It is not a formal requirement in our department to publish in a peer reviewed journal but it is in other departments on campus.
    - ii. "in press" and "submitted" are ok states for papers to be included. If you say "submitted" then you should include the paper with your CV. "In preparation" still works but isn't ideal.
    - iii. Should be a peer-reviewed journal, not the library that your thesis is submitted to.
    - iv. How many? For applied math, by the time you finish your PhD you should have 1-2. After you leave you should publish at least 1-2 each year after that.
    - v. It is more important to have a couple of really good papers versus a lot of ok papers.
    - vi. Impact factor of journals (number of people it reaches, who reads it, etc) is not used in math but is used in other disciplines, peer reviewed journals is ok in math, conference proceedings is ok in some areas of math. You should ask your adviser/ others in the field to explain the standards.
- 2) Recommendation Letters: 3-5 are usually required.
  - a. 1 from PhD adviser.
  - b. The others:
    - i. You should cultivate future letter writers for years. Letter writers should know what you do research wise. To keep them up-to-date, contact them regularly with updates and talk with them from time-to-time. Don't be too pushy or direct about it, use your intuition/people-skills.
    - ii. Looks better if letter writers are from different universities. Use every opportunity, conferences, visiting professors, etc.
    - iii. The greater the prestige of the letter writer university, the better. Note: This is different for teaching positions.
  - c. Some terrific scientist can't write letters of recommendation. Our culture has come to expect inflation of letters and these scientists don't use the superlatives that are expected in letters ("the best student I've seen in years, wonderful, etc). If your letter writer is really famous then other people in the field will know that they do this and will scu your letter appropriately.
- 3) Research/ Teaching Statement:
  - a. Research: 2-3 pages. It's ok to mention a variety of research interests, don't cover the whole field. Be specific about your personal research plan.
  - b. Teaching: 1 page. Don't put too much into it. You can use the same basic format as everyone else. You'll be judged more on your teaching talk during the interview.
  - c. Keep it simple: Don't write too much. Use ppt tricks, headings, figures, bold important statements, etc. Help them navigate through your statement
- 4) Cover Letter: Make it short and simple. Carefully identify your area of research.

## Applying to Schools

- 2 Strategies:
  - o Apply to 100's of schools – use general application and accept all positions

- Apply to 10's of schools. Research and get to know the school. Contact people at the places with a specific purpose, "Does my research fit well in your hiring area?" "Would you be interested in working with me?". This helps ensure you don't fall through the cracks. Don't just contact them to let them know you are applying, have a purpose.

Statistically it makes no difference which strategy you use. In the middle of these 2 strategies doesn't work because you don't have enough time to do it well. It's very easy to miss applications while skimming through the piles. It improves your chances if someone know you're applying

- Doesn't work to apply to places where you have to stretch yourself to fit into the hiring research area. Stick to applying to positions in your personal research areas or open positions. This is different for postdocs.
- Be careful what you wish for, you might get it. This can be very stressful but it is doable.

## Interviews

2 parts, both parts equally important.

- 1) Interview Talk
- 2) Meeting People: You'll be given a schedule with ½ - 1 hour meeting per person.
  - a. You also go to lunch and dinner. It's more social then scientific skills.
  - b. 30 mins is short: Start with meaningless chit-chat. Ask what the person is doing and LISTEN, people like to talk about themselves. But don't listen for the whole 30 minutes, they need to leave with an impression of you. It's like dating.
  - c. It's important to be on top of your research about the school. Read up about people before you show-up.

People underestimate the importance of the entire interview (both parts). The way it works is you have quite a few interviews bunched up together in 1 month. It's easy to be jaded. You need to stay interested and excited. Don't leave them with a bad impression. Do what you need to do to be refreshed and excited.

## After the Interview

Once you hear back from schools you have to choose the right place. Talk around with other people to help you choose, also talk to people at different levels of their careers.

## Postdocs

This is a different, much easier game. If considering a career in teaching, postdocs aren't as useful but they do provide a little rest before you start your teaching job. If you want a research career, postdocs are useful. 80-90% of your tenure application is your publication record. A good postdoc helps delay other requirements to give time to publish.

Spend as long as is needed as a student so that you finish with a good forward momentum. The clock starts ticking after the PhD, no one cares how long you take for your PhD.

2 kinds of postdocs

- 1) Work for a Specific Scientist: Money comes from their grant. To get this type you write to people you want to work with and ask if they are interested in taking you.
- 2) Programs/ Institutes: For example, MBI at OSU. The application look like that of tenure faculty position but there is less scrutiny.

There is lots of money for postdocs (NSF, NIH, Foundations, etc). Do Internet research. If you bring your own money faculty will want to grab you.

Q: What about Postdocing at the same institution: There is a slight handicap for doing this, it's better to move. If you have a good reason to stay that you can explain explicitly in future applications (spouse, family situation, etc) it's ok. At the least you should switch advisers, it looks bad to stay with the same adviser.