

## How to apply for post-doctoral positions...

Disclaimer: This is a rough template to help you navigate the job market process, though by all means, this is not complete. The advice will probably change over time as I am just a first-year post-doc and I certainly do not know all! I do not claim to be an authority on this matter, but I do hope that the material will help in some way. Please adjust the template to suit your needs. Also, most of the material here can be applied to the job application process for other academic positions post graduation. This is advice that I've been fortunate enough to collect over time from too many individuals to list here. (You know who you are. Thanks!) Feel free to send me email (chelsea.notlaw@gmail.com) with questions /corrections /complaints /random thoughts/ etc. Best, Chelsea. :)

Edit (October 2017)–

Actually don't bother sending corrections or complaints, but "thanks" are appreciated. :)

End of July before your final year (for the next 2 weeks)

- (1) Stop research and figure out what you've been doing the last few years
- (2) Teaching Statement (about 1 page)

- **Outline thesis**

One goal of this period to write down a rough outline of the content of your thesis. Dig through old notebooks, files, etc, and write down every result and example that you have achieved. Then, organize these notes. In other words, ask yourself, "What will each chapter of my thesis contain?" Whether or not you have material published/submitted, it is very important that you think about the context of your work to date. Jot down a few notes about this, and it will serve as sketch of your thesis' introduction.

- **Teaching Statement**

Another goal of this period is to compose your teaching statement. This should take about 1-3 days. I found it helpful to jot down my thoughts about teaching right after I have taught a course. What was my goal? What were my approaches to achieving this goal? How did I measure if I was successful? These notes help shape your teaching philosophy.

Note: if you apply to liberal arts institutions or a more teaching intensive institution, then you may want to spend more than 1-3 days on this statement. Please seek more detailed advice from someone else on this matter.

Second/Third week of August (for the next 2 months)

- (3) Apply for the NSF mathematical sciences post-doctoral fellowship, or other fellowships
- (4) Get letters of recommendation, and schedule seminar talks

For (3) –if you're an US citizen, apply for the NSF fellowship! If not, find the foreign equivalent and apply! If you are not applying for a fellowship, use this time to write your

research statement as about 75% of the material that goes into a fellowship proposal and a research statement overlap.

More on the NSF fellowship– it doesn't matter whether or not you think you'll get the fellowship; apply anyway as the deadline (the 2nd or 3rd week of October) is just before the first job applications are due. Then after the deadline, you'll have the time to convert your proposal to a research statement to apply for jobs (see below).

Note that the fellowship requires you to specify a host institution, and you are required to spend your first year there should you accept the funding. Here's what you'll need produce/obtain:

- **NSF project description** (5 page description of your research and future projects)

This will be the most difficult document to write. Not only do you have to sell your research to non-experts and experts alike, you must provide a list of several (relevant) projects for future work. I've heard that the latter is more important the former for this grant proposal. Spend at least 6 weeks on this document. Edit, edit, and edit again.

It is also helpful to obtain several samples of successful NSF proposals. This is only to understand to the format of such documents (1/2 page on this, 1/4 page on that), \*not to copy\* obviously. Your voice must clear.

- **NSF project summary** (1 page = 2/3 page summary of research and 1/3 page description of how your research has a "broad impact" on the mathematical sciences community)

- **Letters of recommendation** (3-4 letters addressing your research, one includes your advisor's letter, and one includes a letter from host institution mentor. You'll also need one letter discussing your teaching experience– for jobs, not for the NSF)

Even though you will spend the most time and energy writing your NSF project description (which will later be turned into your research statement), having strong letters of recommendation is the \*most important\* part of your job applications from what I'm told. Having good letters from leaders in your field is key.

- **Schedule seminar talks** (at least 3)

Email several faculty members in your field who you would like to work with, and ask if they have room in their seminar for you to give a talk. Schedule talks for November - February, no earlier (as you're concentrating on your NSF proposal), and no later as you'll want to be considered in the first round of job selection.

Second/Third week of October (for the next week or so)

NSF proposal due. Don't be late. In fact, be early!!

(5) Work on research statement

(6) Write cover letter template

- **Research statement** (NSF project description + 1-2 page introduction)

Take the notes about the context of your research, and turn them into the introduction of your research statement. Mathematicians of other fields should be able to understand the first page, for instance.

- **Cover letter**

Create a template for the 50+ individualized cover letters that you'll need for applications.

November 1st (for the next 3 weeks)
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First job deadlines

(7) Apply for jobs on [mathjobs.org](http://mathjobs.org) and elsewhere

The majority of the post-doctoral positions that you will apply for are on mathjobs. On the other hand, be aware of the positions (especially foreign positions and institutes) that do not advertise on math jobs. Get the bulk of your applications completed during this period. It goes quite fast; you can easily apply for 10-15 jobs/ day. It's just a matter of changing your cover letter, which can be tedious.

Third week of November (...)
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(8) Start writing thesis and continue research if necessary

(9) Keep an eye out for new job postings