

PhD Application Talk

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August 30, 2018

- About me: I applied for 11 unis; 6 in US; 4 in UK; 1 in Canada. I got offers from Bristol with a full scholarship, Warwick without funding, Waterloo with funding, and I was on the waiting list at Washington. I accepted Bristol.
- This is a combination of things I did that worked and some things I didn't do that I think I should have.

0.1 Getting Started

- Decide what you are interested in, and what you want to research. In pure you don't need to have a particular problem you want to work on, but an area is important. Don't know about applied and stats. Ask your academics.
- Find the schools and academics which are good for this area. Not a matter of going through the list of top unis! Ask your academics. Eg. Bristol and Waterloo were good for number theory but I had never heard of them and they aren't on the top of any lists.
- Make a list of the unis you want to apply for and the academics you would consider working with. Bear in mind that each application will

make you pay 70 – 120 dollars to fill out the application. I think about 10 is a good number and it should include some that you'd really like to get and some backup options which you think you can get.

- The really hectic time is November/December. I would encourage you to start doing this in September/October. The leg-work will really help, and it's not too hard even with thesis.
- The earlier you start the better. If you have a chance now, start thinking and researching.

0.2 For the US

- Usually the program is longer (5-6 years) and you don't start explicitly working on your research area immediately.
- You also don't get allocated a supervisor; you get admitted to the program and then after doing coursework for a while, you get to choose a supervisor.
- Need GREs, both general and mathematics.
- It is essential you take these a month before applications are due, but further back is better.
- I think the subject test run about 3 times a year.
- General hard to prepare for - just make sure you can write a letter. When you book it, they give you some practice papers. This is more than enough and shouldn't be your focus.
- Involves emotional intelligence (comprehension), numerical skills, and critical writing.

- Subject GRE is much harder. You can find some practice papers online and they give you some when you book the test. **THE REAL THING IS HARDER THAN THE PRACTICES.** Don't be complacent, and don't be tough on yourself if you don't finish.
- This includes most of undergraduate mathematics. No niche topics. Basically you need: very good calculus and linear algebra, complex analysis, a bit of graph theory and combinatorics, topology, group theory, logic, algorithms. They are actually a lot of fun!!!
- The GRE only accounts for about 10-20 percent of the decision about your application so don't worry if you don't feel like you do well.
- Venues: In Sydney for the general paper. Very easy. Book through ETS.
- : for the subject paper, you have to book much further in advance, also on the ETS website. I think it depends on the time of year. I did it at the end of October last year and I had to fly to Wellington to complete it!
- Results come out for the general GRE immediately/1 week later. Subject takes about 3 weeks ... I think.
- For the application itself. Every uni has slightly different procedures and dates. Nearly all applications in the US are due 12th to 15th of December. **YOU CANNOT SUBMIT 10 APPLICATIONS IN 1 DAY. YOU NEED TO LEAVE SEVERAL DAYS TO TIDY UP.**
- Some things needed in common to most unis:
 - Official Transcript (some places are happy to take photocopies, some require originals which you can get sent from the uni).
 - Personal statement - why you want to study there (need to convince them to take you over some domestic US student)

- GRE scores (you pay to send them to the institutions. This is done through the ETS login)
 - 3 letters of recommendation (from academics). Make sure some members of staff know you and your capabilities. The more eminent the writers of your references the better (because then they know more people and it's more likely they will catch the eye of someone at the department there to vouch for you).
 - List of courses taken and publications.
- The best way to get a good spot is with flattering letters of recommendation and having some publications. They are assessing your potential as a researcher, so having publications helps. It is not imperative (I didn't have any) but it helps!
 - The thing is you are trying to distinguish yourself from students from well-known institutions. Use as much objective things in your personal statement.
 - Be aware that you have to give your referees time to write a reference for you have to open the application and send them the link well in advance. Also be aware that it takes several days for GRE results to arrive at the unis you are applying to.
 - Your referees submit their references online. In your application you give their details and they will receive a link to upload references to their email.
 - When applying in the US, if you are offered a place you will nearly always be offered a place with sufficient funding for you course and living expenses. You may also like to apply for another scholarship (eg. Monash, Fulbright) but this is up to you.

0.3 For the UK

- Usually the degree is 3-4 years.
- Usually applications are due later, more like the start of January. However be aware that while many universities do allow later (some accept applications year-round), there are often cut-off dates to be considered for funding.
- You apply specifically to work with a supervisor in a particular area (with some flexibility). You nominate this person or persons in the application.
- For this reason, start messaging people at these places who are in areas that interest you. Start as early as September/October. Your teachers will have a good idea who is doing interesting research and would be a good choice of supervisor in these places. TALK TO THEM!!!
- If you can build a good rapport with a potential supervisor, they will be able to plead your case at the department meeting where they choose the successful applicants.
- There are no tests but you will be interviewed if they are sufficiently impressed with your application. This usually happens via Skype. They will want to talk with you about your research interests and they will ask you challenging questions about things you have done eg. your thesis. They will also ask you some technical things about your coursework, so make sure you can talk about these things, especially your non-standard honours courses.
- Guide the interview. This is a skill. Try to make the natural flow of the interview accentuate your best traits and gloss over your weaker ones. For example, if you're asked "What is a course you enjoyed in your honours year?", you should choose something which you are

comfortable talking about at some length. It doesn't have to be your favourite course.

- Get to know your interviewers and their research interests. Usually it will be the person/persons you nominated in your application as potential supervisors. If you can bring in ideas that interest them, so much the better ... but don't force it!
- Funding is more difficult. At some places (eg. Oxford and Cambridge), you will automatically be considered for any scholarships for which you are eligible. Usually such places offer places with funding attached.
- At other places in the UK, you have to take separate interviews for fellowships and studentships, and have to apply separately. Furthermore, there are often much fewer funded places for international students. I suggest that when you message potential supervisors, you also ask explicitly about funding opportunities for international students.
- Reference letters are submitted in much the same way as in the US.

0.4 For Canada

- Similar to UK in application times and duration. You sometimes need GRE. No interviews were required (at least where I applied).
- In Canada, you need a masters degree to enter the PhD programs. It is not uncommon for people to go and do their masters in Canada and then continue on to do their PhD.

0.5 Hearing Back

- All unis sent out offers at different times. US unis start in mid-January and continue up until April. UK unis usually get back to you within about a week or two of interviews.

- Some unis may message you to say you are on a waiting list. This is a good sign. If someone gets into 5 places they can only accept one and for each place they decline, someone from the waiting list is asked.
- There is a hard deadline (about 15th April) after which everyone has to accept or decline offers. In this period, often more places are freed up so people on waiting lists get in. Some unis in the UK give deadlines earlier than this. If this is the case but you want to see if you get in off a waiting list elsewhere, you may ask for an extension of the accepting deadline. The worst thing they can do is say no!
- For most places the start of the program will be in late September.

0.6 Final Thoughts

- In the UK, know your honours and thesis work very well and be prepared to talk about it at length.
- Try to get something published (if at all possible).
- Make sure you get referees who will say nice things about you and preferably will be known by overseas academics.
- Keep a copy of everything you submit. That way you always have written proof of each part of your application.
- You will have to spend money. There is no way around that! Some places may waive the application fee but seldom for international students.