Resources for Graduate School Application in Psychology

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Note: This was last updated 9/18/2019. When considering application deadlines or procedures, please check the primary source to confirm; things may have changed slightly since the writing of this document.

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RESOURCES

Ending Thoughts

Introduction

Hi all,

Welcome to a Swatties guide to applying for graduate school programs!

Who we are:

Luiza: My name is Luiza Santos. I graduated from Swarthmore in 2017 with a double major in Psychology and Studio Art. I worked for one year as a full-time Behavioral Research Fellow at Northwestern University, before joining Stanford's Psychology PhD program in 2018.

<u>Kirsten:</u> My name is Kirsten Morehouse. I graduated from Swarthmore in 2018 with a double major in Psychology and Cognitive Science. After graduation, I worked as a full-time RA at Harvard University for two years. I am *currently* navigating the whirlwind that is the grad school application process.

As many of you know, applying to graduate school in Psychology can be daunting. The process is very competitive and it can be hard to find good resources by yourself. With that in mind, we compiled some of the most valuable advice we could find to create this document. Some of the resources presented here were adapted from conversations with faculty and from other online materials. When applicable, we will post links to original guides.

Our hope is that this guide will be useful to people in different career stages, from college sophomores to folks holding full-time pre-doctoral research positions. However, this guide may be more applicable to people interested in non-clinical areas (Luiza is in an Affective Science/Social Psychology program and Kirsten works in an Implicit Social Psychology lab). If you are interested in clinical programs, <u>this guide</u> seems to be popular online.

Also, please note that every lab is different, and while we can share our own experiences applying to PhD programs, we can't guarantee that these insights will be generalizable to every school and every PI.

Feel free to reach out to either of us if you have additional questions:

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GUIDE OVERVIEW

1. Application Timeline

2. Before Applying

Are you interested in applying to grad school, but you are not sure how to best prepare? Here are some tips (to learn more, click on the appropriate sections):

- A) <u>Get involved in research!</u> Whether it's on campus, or during the summer, getting exposure to research is a crucial step in increasing your chances of getting accepted to a good program.
- B) <u>Learn statistics.</u> Knowing how to analyze data will be super important in graduate school and will also increase your chances of getting a good full-time research position after you graduate.
- C) <u>Learn how to code</u>. The scientific push toward open science practices has made coding a very important skill to develop. Learning how to use R will not only expand the analyses you can do, but will also make your research easier to reproduce.
- D) Learn other area-specific skills
- E) If you can, try to <u>attend conferences</u>. It is a great way to learn about the latest findings in your field and to meet potential advisors. Talk to your current advisor about presenting a poster. Swarthmore offers some grant opportunities to offset travel costs.
- F) <u>Get on Twitter.</u> This may be a very counter-intuitive tip, but Twitter is a great resource for academics. Scholars use it to divulge their latest findings, talk about new methods, and advertise PhD and RA positions.

3. Application Time

Start preparing early. Set yourself apart by taking the time to carefully craft all elements of your application.

- A) Prepare for the <u>GRE</u>
- B) Update your <u>CV</u>
- C) Look for programs that are a good fit for your research interests.
- D) Ask for letters of recommendation early.
- E) Take time to write a solid personal statement.
- F) If possible, apply for grants.

4. Post-Application Submission

You've sent your applications in. Now what?

- A) Interviews. Tips on prepping (and nailing) your interview.
- B) <u>Selecting a program.</u> You got in, congrats! Now it's time to make sure you're landing in the place where you'll be happiest and most productive.

APPLICATION TIMELINE

May: Take a practice test, create your CV (or update it if you already have it)

May - June: Start creating a list of potential advisors and reading their papers. Take notes about what drew you to your work (this will be helpful when it comes time to email them)*

*If you can, show this list to a mentor and see what they think. They might have inside knowledge about who is or isn't accepting students, or realize there are perfect PIs that aren't listed.

July: [Optional] Look into potential grants and decide whether it makes sense to apply

July - August: Email potential advisors, reach out to potential letter writers

August - September: Start drafting your personal statement

Early September: Finalize a list of schools (we recommend 6-12) and 1-2 professors you would be willing to work with at each school (if there is only one professor you are interested in working with, this school might not be the best fit)

Mid September: Send your letter writers an excel document to help them send your recommendation letters. This should include: Name of school, names of potential PIs, department type (e.g., social psychology, clinical psychology), application deadline, how to submit (e.g., email, online portal). There is no common application for graduate school, so this will help ensure all of your letters are submitted

Early November: Start tailoring your personal statements. If you are really interested in a program, you're essay should be directed at them. It shouldn't read like a general personal statement.

Late November: Update your CV and finish your personal statements. Some applications open.

December: Most applications open.

BEFORE APPLYING

A. Research Experience - Luiza

Take advantage of the research opportunities available to you: volunteer as an RA at one of the labs on campus, write an honors thesis, and apply for summer internships.

Research experience is important for multiple reasons. It helps you to (1) hone your research interests, (2) get acquainted with different methods, and (3) learn if you actually enjoy doing research. It also allows faculty members to get to know you better, which will be very helpful when asking for letters of recommendation later on.

To illustrate this point Lera Borodisky, a professor of cognitive science at UCSD, writes:

"The PhD program is all about research. It is very risky for a program to admit a student who hasn't done research before. Many people like reading about ideas, but being the primary researcher is a very different set of skills and experiences. You have to be self-motivated, you have to persevere in the face of frequent failure, you have to know how to learn from mistakes and probe deeper, you have to stick with a single question for a very very long time, you have to constantly adapt and reconsider and be ready to be wrong over and over again. Some people love the daily work and rhythm of research and some people hate it. You can't know until you try it. If you're signing up for a lifetime (or at the very least 4-5 years) of research, you should do your due diligence and try it first."

Ok, but how you I get research experience?

At Swathmore

<u>Work at a lab</u>

Swarthmore has awesome faculty members and psychology labs you can work as a volunteer or for credit. I would recommend working in a couple different labs to get some breadth and to learn different methodologies.

<u>Here</u> is a list of the labs on campus.

Work during the summer

Swat also offers some grants and fellowships that can be used to support students' academic work over the summer:

<u>Hans Wallach Fellowship</u> <u>Joel Dean Research fellowships</u>

<u>Senior thesis</u>

I highly recommend applying to complete a senior thesis in the department. Working on a thesis project pushes you to think deeply about research and to get acquainted with every step of the research process: from conducting literature reviews to writing a manuscript.

Elsewhere

During the academic year

During my senior year, I also looked for opportunities at nearby universities and ended up working once a week at a lab at UPenn. *If you are an international student, please make sure you talk to Jen Marks-Gold before you accept work opportunities outside of Swarthmore.*

During the summer

Working at a lab at a different university while studying full-time can be very challenging. Summer internships provide a good alternative to that. Applying to a summer internship can give you exposure to labs outside Swat and help you expand your academic network. Many large research universities offer fully funded summer internships:

<u>Here</u> is a link to the APA page on summer internships.

If you can, spend at least one of your summers as an undergraduate working in research full-time.

If you love someone's research and can afford to volunteer, get in touch with the lab's PI or their lab manager even if they don't have any open opportunities listed on their website. Many professors are happy to have motivated RAs working with their graduate students over the summer.

If you are a member of an underrepresented group, here are a couple other resources to keep in mind:

- SPSP offers the Summer Program for Undergraduate Research (SPUR), which is an intensive summer internship in the methods of social and personality psychology for undergraduates from underrepresented ethnic groups. This 8- week program comes with a \$3000 stipend to cover living expenses and \$500 to cover travel expenses.
- Some psychology departments hold Diversity Recruitment Weekends, where ethnic minority undergraduate students are provided with information related to graduate school in psychology. These weekends include opportunities to meet graduate students and faculty members, as well as workshops to help prepare students for the application process.

After graduation

Most people take at least one year to work as a full-time lab manager or research assistant before applying to graduate school. It is important to note that the application process for these pre-doctoral jobs is also very competitive. Much of the advice given here (e.g., learn statistics, learn how to code, get involved in research, prepare for the interview) will also come in handy when applying to these positions.

Where can I find academic jobs?

- Society for Personality and Social Psychology Career Center: <u>http://www.spsp.org/CareerCenter</u>
- This Georgetown Wordpress: <u>https://gupsychology.wordpress.com/</u>
- The Social Psychology Network: <u>https://www.socialpsychology.org/forums/jobforum/</u>
- The APA's job board: <u>http://www.psyccareers.com/</u>

Another way to find open positions is to google the schools you would like to work at and find their career center page, RA and Lab Manager positions are usually listed there.

Additionally, you can also join conferences' listservs. If you become a member of SPSP, SANS, or APS you will be part of their members' listservs and receive emails related to jobs, as well as other types of academic content (just be aware that the amount of emails can be a bit overwhelming and most of them may not be relevant to you).

Get in touch with people who you know (e.g., upperclassmen who are in the same field, research assistants at other colleges, etc) and ask about open positions. They may have inside information on which jobs may be opening up.

Note about timing: most of these jobs are posted around February-May. Don't panic if most of your friends have landed consulting jobs in the Fall and you are still unsure of what to do. The cycle for academic jobs seems fairly different from positions in industry.

B. Learn Statistics - Luiza

If you have the time, I would recommend taking more statistics classes than the amount required for the psychology major. Well-rounded statistics knowledge will set you apart from most other applicants. If you can't commit to taking other statistics courses, check out these free online resources:

Resources

<u>An introduction to statistical learning:</u> Introduction to statistical learning including regression, classification, resampling, and unsupervised learning techniques. - <u>http://faculty.marshall.usc.edu/gareth-james/ISL/</u>

<u>Answering questions with data:</u> Introductory statistics textbook. - <u>https://crumplab.github.io/statistics/</u>

<u>Statistical Inference via Data Science:</u> A modern dive into R and the tidyverse: A gentle introduction to the practice of analyzing data and answering questions using data the way data scientists, statisticians, data journalists, and other researchers would. - <u>https://moderndive.com/index.html</u>

<u>An introduction to Bayesian thinking:</u> Companion book to the Statistics with R course on Coursera. - <u>https://statswithr.github.io/book/index.html</u>

C. Learn how to code - Luiza

R is a highly popular language in academia. It is free and very versatile. It has great packages for data wrangling and visualization. It also has a wonderful community of users who are motivated to improve existing packages and provide consistent online support. If you are not sure what language to try at first, I would highly recommend R. However, depending on your field, you may need to learn other languages such as Matlab, Python, and/or Java. In general, being acquainted with at least one coding language is very important in academia these days. It makes your science easier to reproduce (you can join the Open Science movement and post your code online), it allows you to handle large datasets, and craft detailed visualizations.

If you can't take CS or R-based Statistics classes at Swarthmore please consider taking advantage of online resources listed below.

R Resources

A very basic intro to R: <u>http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html</u>

This amazing book by Garrett Grolemund and Hadley Wickham is completely free and is a great introduction to data analysis in R. <u>https://r4ds.had.co.nz/index.html</u>

Data visualization in R: http://socviz.co/index.html#preface

Advanced R - The book is designed primarily for R users who want to improve their programming skills and understanding of the language: <u>http://adv-r.had.co.nz/</u>

General Resources

Datacamp is a paid platform that offers online courses in Python and R. It is a good way to learn a bit more about coding. <u>www.datacamp.com</u>

Santa Fe Complex Systems Society offers lots of free courses. <u>https://www.santafe.edu/engage/learn/courses</u>

Also, check out the Open Science Framework (OSF, <u>https://osf.io/</u>) and the Society for the Improvement of Psychological Science (SIPS, <u>http://improvingpsych.org/</u>) for information and resources on leading-edge efforts to improve transparency and replicability in psychological science.

*****Important note on coding:** If you don't feel confident about your coding knowledge, <u>do not worry</u>. We are posting resources here to help you get ahead, however, compared to research experience, this skill is mostly a really nice bonus. It will make your life easier later on, but you can still be a highly qualified candidate without it.

D. Other Important Skills - Luiza

Keep an eye out for area-specific skills that you may need to build.

For example, in social psychology, the survey platform Qualtrics is widely used. It makes sense to get acquainted with this tool if you are considering a program in this area. As researchers have increasingly been collecting data online, it is also recommended to learn about Amazon Mechanical Turk (Mturk), the crowd-sourcing platform where most studies are hosted.

The skills you will need to develop will also depend on your focus inside your sub-area. For instance, you can be in social psychology, but use methods that involve neuroimaging, eye-tracking, and computer modeling.

By working as a research assistant in your sub-area of interest, you will likely learn about these skills organically. Nonetheless, it doesn't hurt to go to a prospective lab's website and take a look at current graduate students CVs. That will give you a sense of the technical background that is valued in that lab. Try to not engage in social comparison, though. Graduate students had more time to hone these skills than you have. Don't worry if their technical expertise is more extensive than yours.

E. Conferences - Kirsten

Conferences are not only a great addition to your CV, but also an amazing opportunity to meet people, practice talking about your research, and expose yourself to emerging topics in the field.

Many conferences allow undergraduates to submit poster abstracts on data that is **not yet collected,** so don't worry if you're doing a senior thesis but won't have the results by September/October. Still apply!

If you decide to attend...

Where to get funding:

- 1. Your Lab
 - a. Some professors will use their labs' money to fund you. Just ask!
- 2. Psychology Department
 - a. The psychology department may be able to provide a stipend. Ask Kathy Timmons or the professor you are submitting with

- 3. Dean's Office
 - a. \$400-600
 - b. <u>https://www.swarthmore.edu/student-life/student-conference-funding-guidelines</u>
- 4. Sigma Xi
 - a. Students are permitted to pre-apply for scientific conference/meeting travel funds for up to \$1000 per student/per year.
 - b. <u>https://www.swarthmore.edu/sigma-xi/funding</u>
- 5. Emergency Funds
 - a. https://www.swarthmore.edu/student-life/student-emergency-fundi ng-guidelines

Preconferences:

If there is an area within psychology you're really interested in (e.g., thinking, judgement, decision making; emotion) consider going to a preconference. Preconferences are almost like mini-conferences. They happen before the conference starts and include presentations by some of the big names in that field. It is a great way to surround yourself with some of the people you might apply to work with or whose work you've encountered and enjoyed while at Swat.

Other Tips:

<u>Conference Hotel Rate:</u> If you're staying at the same hotel as the conference, make sure you book through the conference website. There is often a discounted student rate.

<u>Room-sharing options:</u> Conference accommodations can be expensive. Often conferences will organize "room-sharing" spreadsheets. Basically, if you are willing to share a room with someone, you can post your name and see if other people have similar travel plans as you. It's a great way to meet people and split your hotel cost in half. (Of course, you can also choose a different hotel or go the airbnb route, but for your first conference, I'd recommend staying at the conference hotel so you can be close to all of the action)

<u>Discounted flights:</u> Check the conference website to see if they've partnered with an airline. You might be able to get a discounted rate!

<u>INVITE PEOPLE.</u> Some conferences will let you choose 2-3 people to invite. If you are a big fan of someone's work and/or your study is based on their work, invite them! They may not come or may not even be attending the conference, but it can be a great opportunity to network and get your name out there. What conferences should I be going to?: Here is an extensive list of conferences by area: <u>https://psychology.ucmerced.edu/node/117</u>

F. Academic Twitter - Luiza

Seriously, it is a good way to get exposed to the latest research in your field from the comfort of your home.

Scholars use this space to discuss science, share their research, and actively engage with different academic communities. By taking advantage of Twitter's friend suggestions, you can start by following a couple people whose research you admire, and end up learning about a bunch of new scholars who have similar interests. Also, as preprints are becoming more popular, you may even have access to scientific articles before they are published.

Moreover, many professors use Twitter to offer graduate school advice and advertise open Research Assistant/Lab Manager positions in their labs. In fact, much of the content you are reading about here was found on Twitter :)

APPLYING TO PROGRAMS

A. GRE - Kirsten

Yes, another standardized test that carries much more weight than it should. Kirsten's advisor, Mahzarin Banaji, would tell you that even professors who say – or even believe – that they don't care about GRE scores, care immensely. When taking an initial pass through applications, GRE score is often something that PIs use to sift through their application pile.

The benefit of the GRE is that not only it is accepted in lieu of other tests (e.g., LSAT), it is offered *very* often, so you have the freedom to choose your test date. However, the GRE takes different levels of preparation for different students, so give yourself plenty of time to prepare – and note that you have to wait 21 days before taking it again, so make sure you give yourself this time in case you feel that your first test does not showcase your abilities. There is also a new feature called "ScoreSelect" that allows you to pay an additional fee to have *only* your best score sent to your target schools. If you have test anxiety, this might be something to consider so that you can go into the test knowing you can take it again if necessary. (link here:

https://www.ets.org/gre/revised_general/about/scoreselect)

Costs.

Preparing for, taking and sending standardized tests can be expensive. ETS – the service that offers the GRE – offers need-based fee reduction program* and free online resources.

ETS Fee Waivers: https://www.ets.org/praxis/about/fees/fee_waivers/

ETS fee reduction program: https://www.ets.org/gre/revised_general/about/fees/reductions

ETS' free online resources: <u>https://www.ets.org/gre/revised_general/prepare/</u>

What ETS' free online resources Includes:

- Information about the GRE General Test
- Two free practice tests (via POWERPREP® Online)
- One full-length paper-delivered practice test and scoring key, test-taking strategies, sample Verbal Reasoning and Quantitative Reasoning questions with explanations, sample Analytical Writing topics, scored Analytical Writing responses and reader commentary and information on how the test is scored
- Math Review

- free 100-page review covers the concepts you may see when you take the GRE General Test. Math Review includes definitions, properties, examples and a set of exercises with answers at the end of each section.
- Links to helpful Khan Academy videos
- Math Conventions
 - Documents the mathematical assumptions particular to the GRE General Test. Includes notation and terminology as well as guidelines for interpreting and using the information given in test questions.
- GRE® Diagnostic Service
 - o Taken the test already? This will help you identify your problem areas for the next test

*in some cases, if you qualify for ETS' fee-reduction program, graduate schools will waive application fees

Tips and Resources:

- Start studying the vocab early. It is recommended that you master 1,000-3,000 vocabulary words for the test. This seems daunting, but a great strategy is to a) gamify it and b) create mnemonics; when you're mastering this many words, you don't want to cram. Try to make meaningful connections or funny backstories with each word, and practice using them when you test yourself on the meaning of each word, so on test day the connection can help jog your memory.
 - a. We recommend creating your own mnemonics, but this website crowdsources others: https://mnemonicdictionary.com/
 - b. Magoosh vocabulary builder (free): https://gre.magoosh.com/builder/vocabulary
- 2) **Take a free practice test** that has "problem area" features. Not all practice tests are created equally. Taking a practice test is helpful regardless because it'll provide you with a baseline and give you an idea of how much prep you'll need, and start getting you comfortable with the timing and format. But it is especially helpful to take a practice test that identifies the types of questions you are spending the most time on, and getting incorrect so you can focus your studying.
 - a. Kaplan free diagnostic test:
 - https://www.kaptest.com/gre/free/gre-practice-test-options
- 3) **Read.** Read. Reading articles from places like the New Yorker and the Economist will help you brush up on vocab while getting comfortable with the type of syntax that you will see on the Verbal sections of the GRE.
- **4) Learn the math.** The GRE tests your ability to think about mathematical concepts, not your ability to compute complex equations, so being comfortable with the math behind each problem will help you intuit the best way to solve complicated problems quickly.

- **a.** Khan Academy has free videos that will help jog your memory on rusty concepts
- 5) Make studying a habit. Try to weave studying into your daily routine. Do you have 75 minutes between classes on Tuesdays and Thursdays? Carve out 30 of them to study vocab words, and make this you're routine. A later start time on Mondays and Wednesdays? Study for an hour before class. It is easy to put studying off when you have more pressing deadlines, so try to keep yourself honest by making your "GRE time" just as compulsory as one of your classes. Put specified times in your calendar if you need to!
 - a. If you need something to stick to, Magoosh has free study guides designed to fit your schedule (daily, weekly; 1 month, 3-month): <u>https://gre.magoosh.com/study-plans</u>

B. Crafting your CV - Kirsten

If you're not familiar with a CV, it is basically an elongated resume that will eventually house lists of your publications, presentations you've given, students you have mentored, etc. Until then (or perhaps you already have some of these, in which case you're ahead of the game!), you'll want to include your education, research, work and leadership experience, awards, skills (note coding languages here), and anything else you think might tell potential PIs about you or make your application unique. Here is a CV checklist from APA (American Psychological Association: link: https://www.apa.org/gradpsych/2015/01/curriculum-vitae):

The vitae checklist (we modified the checklist to make it more relevant to non-clinical applicants):

- 1. Name and contact information, including work and home phone numbers, address and email.
- 2. Education, including college degrees, places and dates. Dissertation topic.
- 3. Honors, scholarships, fellowships or awards.
- 4. Research Experience. Summer Internships.
- 5. Publications.
- 6. Professional or academic presentations.
- 7. Teaching or clinical experience, if applicable
- 8. Professional organization memberships.
- 9. Volunteer or service work.
- 10. Licenses/certifications, including state and certificate number, if applicable.
- 11. Technical skills (e.g., coding languages)

It's helpful to create this earlier rather than later, because professors might ask for it when you email, and it will help you pull out the pieces you'll want to highlight in your emails to them.

More (Hopefully) Helpful Tips:

- Save your CVs with the date at the end of the file (e.g., Morehouse_CV_Sept2019) name to ensure that you're always sending the most current version
- Check your links. If you include links in your CV, make sure they work.
- Place things in chronological order, with the most recent at the top. People will be most interested in what you're working on now
- Other tips on how to make a strong CV from APS: <u>https://www.psychologicalscience.org/members/apssc/undergraduate_up</u> <u>date/undergraduate-update-summer-2013/how-to-write-a-strong-cv</u>

If you want an example, please feel free to ask and I'll send you mine! <u>knmorehouse@gmail.com</u>

C. Identifying Potential Fits (and reaching out to them) -Luiza

Step 1. Identify your research interests

What topics interest you? While reading papers for your classes, try to notice the general theoretical space that intrigues you the most. Do you keep thinking about that one paper on how moral language increases virality in social networks? Or do you get more excited about learning about how children resolve linguistic ambiguity? If you can't pinpoint your interests, get all your favorite papers together and look for patterns. What are the commonalities between them? You don't need to have very specific research question from the start, but it is helpful to have a broad idea of what you would like to study. After all, research is what graduate school is all about.

Step 2. Identify potential advisors

Once you have a good idea of what you would like to study, try to find laboratories doing similar work. Use google scholar to search for keywords related to your interests. Who are the authors of the papers you liked to read the most? Search for their names and find their lab web pages. You can expand your search by looking for their collaborators. They are usually listed on these websites under a 'people' tab, you can also find them by looking at frequent co-authors on the papers listed in the 'publication' section.

Step 3. Consider key advisor qualities that are important to you

If you have a current advisor, it is a good idea to show them a list of your top mentor choices and ask for their feedback. Professors often know each other and your advisor can help you pick mentors that are a good fit for you.

When selecting who you would like to work for, it is important to consider both professional and personal elements.

<u>Professional</u>

How is this person's research output? If they haven't published anything in the last few years, that may be a red flag, - especially if your goal is to get an academic position after graduate school.

Are they still researching things that interest you? Sometimes, people's academic interests change. Take some time to make sure that your potential advisor's current work still matches what you would like to study in graduate school.

Once you have assessed research fit, it is crucial to think about how you can help develop your potential advisors' research programs. If they have been researching moral judgments using the trolley problem for the past 10 years, saying that you want to do exactly that for the next 5 years may not be very intellectually stimulating to them. Most PIs want graduate students with novel ideas that will help move their research forward. Think about how your academic experiences can put you in a position to offer a fresh perspective.

<u>Personal</u>

Would you like to work with an advisor who is very involved with every step of the research process or do you prefer to work independently? Do you need a lot of structure? Would you prefer to work with someone who is more laid-back or do you thrive under high expectations? Is it important to you that you generate your own research ideas or would you be happy working on projects related to past lab grants?

These are just some examples of questions that can help you decide what work environment suits your needs and pick compatible advisors. If admitted, you'll be at the program for a significant amount of time (4-6 years), so you want to make sure you attend a program where you feel comfortable.

It can be very hard to have information on your potential advisor's personality and work-style before applying. That is why it is valuable to ask your current academic mentor for their perspective. You can also get more information by emailing graduate students (see Step 7). Moreover, you will be able to gather more information as you move along the application process. If you are invited for an interview, you will have the chance to ask questions and figure out how well you match with your prospective advisor and the overall program.

Step 4. Apply to 6-12 programs

Don't just apply to 2 schools. Admission rates are very low and it would be unwise to only focus on a couple programs. If you are interested in clinical psychology, it is advisable to apply to 12-16 programs. However, do not apply to a university that you wouldn't attend even if it were your only choice, that would just be a waste of your time.

Also, keep in mind that the cost of applications is nontrivial. Depending on your financial situation, it is worth checking if you can get some of the fees waived.

After you pick your programs, it can be chaotic to manage all these applications and their respective requirements.

Step 5. Be organized

After you pick your programs, it can be chaotic to manage all these applications and their respective requirements.

Pay attention to what each school is asking for. Some places require the GRE subject test, others don't. Some places ask for a writing sample, others ask for a diversity statement. Many have different page, spacing, and font requirements.

Given the lack of standardization, it is helpful to create an Excel spreadsheet to keep track of your application process for each school. Use it to list each program application deadline, the faculty member(s) you are interested in working with, and specific requirements. Organizing all the information you need in one place allows you to easily monitor your progress. Here are some pictures illustrating the spreadsheet organizational structure (provided by Marissa Clark):

School	% Completed	
UC-Boulder	100%	All materials received
Princeton	100%	
UCLA	100%	Not all materials received
Columbia	100%	All materials received
Dartmouth	100%	All materials received
Johns Hopkins	100%	Not all materials received
Northeastern	100%	

Columbia	100.00%	https://apply.gsas.columbia.edu/apply/
Home	Completed	
Getting Started	Completed	
Personal	Completed	
Program of Study	Completed	
Educational History	Completed	
Test Scores	Completed	
Scholarships, Fellowships, and Exte	Completed	
Curriculum Vitae	Completed	
Statement of Academic Purpose	Completed	approximately 1000 words
Optional Diversity Statement	Completed	
Writing Samples	Completed	
Supplementary Media	Completed	
Recommendations	Completed	
Certification	Completed	
Review	Completed	
+	C-Boulder 👻	Princeton - Columbia -

Step 6. Email potential advisors.

This is an important and, often overlooked, step. Once you have picked some programs, email your potential advisors to show you are interested. Some advisors ask not to be contacted, if that is the case then, of course, do *not* email them. However, most of them will like to hear from you. In fact, some advisors interview applicants before the application process even begins. Email them early (late Summer/early Fall if possible) to show that you are organized and that you really want to work with them.

How should I structure my email?

Write a short email: Introduce yourself, summarize your experiences and research interests in three or four sentences, say you are interested in applying, and ask if they will be accepting students that year, attach your updated CV.

Also, - this should go without saying,- BE NICE. Some applicants email faculty as if they are entitled to a 50 min Skype call only because they read 3 of their abstracts. These people are busy, please be mindful of that when reaching out.

Here is an example:

Dear Dr. X,

My name is Jane Smith, and I am currently a senior/lab manager/RA at Y University. I'm writing to express interest in joining your lab and ask if you'll be taking students this year.

Broadly, I'm interested in *** . My current research involves *** (mention any pertinent work in progress). I'm incredibly interested in your work on *** and I believe your research is very aligned with the direction I would like to take in graduate school.

I have attached my CV for your reference. Please let me know if you would like any further information from me, I'm happy to discuss my research experience and interests in more detail.

Thank you very much for your time, Jane Smith

Click<u>here</u> for more detailed advice on emailing potential advisors.

Step 7. Email graduate students in those labs.

Most of us understand how terrible the grad school application process is and will be happy to chat and provide some insight into our specific labs.

Please ask specific questions. For example, "Can you talk about your experience in graduate school?" is too broad and decreases your chances of getting an answer. What about graduate school you would like to learn about (e.g., research, classes, TAing, work-life balance, relationship with advisor)?

Don't take it personally if you don't hear back, graduate school can be hectic.

D. Letters of Recommendation - Luiza

You will likely need at least three letters of recommendation. It is advisable to ask for letters of recommendation early (at least two months before they are due). Ask for letters from professors you have worked closely with. They will be in the best position to vouch for your academic dedication and research interests.

If they accept to write you a letter, provide a clear summary of all programs you are applying and the letter due dates for each.

After applying, make sure to keep your letter writers updated. They are invested in you and will like to know about the outcomes of your applications.

E. Writing a Compelling Personal Statement - Luiza

I won't claim to be an expert in personal statements. I only wrote my own and didn't read many others. However, from what I heard, three things seem to be critical when writing a compelling statement:

- 1) Make sure to specify which faculty member(s) you intend to work with
- 2) Write about research you hope to conduct. What questions interest you? What experiences have prepared you to tackle these questions?
- 3) Make it clear why you would like to go to that particular institution. Why are you a good fit for that specific program?

Below are some excerpts of different professors' take on the personal statement.

Jay Van Bavel (NYU), June Gruber (University of Colorado in Boulder), and Neil A. Lewis, Jr. (Cornell University): "Perhaps the most important element of the application is the research statement. Faculty members use the statement to get a sense of your writing ability, passion for the field, research experience, intellectual potential, and fit with the program. Your goal is to show that you are a deep thinker who is ready to become a scientist. Read some of the papers your potential advisers have published, think critically about them, and offer specific ideas for extending the work in new directions. Look at sample statements from graduate students in your field. Ask for feedback from as many relevant people as possible, including graduate students and faculty members in the field (not your roommate or your parents). It may feel tedious, but the practice of writing and rewriting is one of the most essential skills you will hone in graduate school." (link)

Lera Boroditsky, UCSD professor of cognitive science:

" If you have been involved in research, tell us something meaningful about that experience, making clear the roles you played, why you did what you did, what you learned, and what it means. If you have published papers as a result of research, mention these and include a bibliography at the end of your statement. Don't just laundry-list experiences or personal qualities, demonstrate an intellectual engagement and understanding through your writing.

Show don't tell. Don't *tell* us that you're a good writer or that you are serious or that you have tons of interesting ideas about how the mind works. Show us by sending in a well-written statement that demonstrates serious engagement with interesting ideas.

Your statement should make clear which faculty members you see as potential mentors. Research fit is extremely important, so help the committee see how your interests fit with those represented in the department. In your statement, explain how your prior experiences lead to your present day interests and plans for graduate study.

When you describe your interests you want to have some specifics, but don't unnecessarily pigeonhole yourself. If you have ideas, go ahead and propose some specific studies you would be interested in doing. But don't make it sound like some one experiment is the one and only thing you're set on doing. You're coming to graduate school to collaborate on research projects with faculty and if all goes well you will learn new things and your interests will grow, mature, and change as a result of the stuff you learn.

In the context of applying to graduate school, experiences from when you were 3 or 5 years old are unlikely to have a lot of weight. Skip childhood stories and instead talk about your research and academic experience, your ideas and interests for the future.

Be sure that the faculty you're applying to work with are actually in the department you're applying to.

Do your homework! If you claim to be super inspired by a finding or a paper, be sure to have actually read the whole paper.

If you are coming from a system where the grading scheme is different from the standard American model, make sure that somewhere in your application there is a guide to understanding your grades. For example, an 80/100 grade average would be pretty poor performance for most US schools. If 80/100 is the highest grade anyone has ever gotten in your program, be sure to let us know."

Tailor your essay to each program. Make sure you highlight your overlapping interests with faculty from each school. Additionally, each application may ask to write slightly different things on your personal statement, ensure to thoroughly address all aspects of the essay prompt and to stick to the page/character limit.

If you feel that you need a sample personal statement and you can't get one from your current lab, email Luiza at lsantosl@stanford.edu and ask her to send you some examples.

F. Applying for Grants - Kirsten

In some cases, applying for outside funding can dramatically increases your chances of getting into a program. Because accepting a graduate student is a large investment financially (and in terms of time, of course), having external funding may allow a PI to admit you if they themselves don't have funding that year.

With that being said, this is *not always* the case. However, receiving a grant is a great boost to your CV, so if you have the time, it is worth considering!

The most prominent grant is the **NSF Graduate Research Fellowship Program** (link: <u>https://www.nsfgrfp.org/</u>). It provides "a three-year annual stipend of \$34,000 along with a \$12,000 cost of education allowance for tuition and fees (paid to the institution), opportunities for international research and professional development, and the freedom to conduct their own research at any accredited U.S. institution of graduate education they choose."

To apply for the NSF grant, you'll need three letters of recommendation, a "Personal, Relevant Background and Future Goals Statement" and a "Graduate Research Statement." The deadline is typically late October (in 2019, the deadline was October 24th).

NSF resources:

FAQs: <u>https://www.nsf.gov/pubs/2019/nsf19081/nsf19081.jsp</u> Application components: <u>https://www.nsf.gov/pubs/2019/nsf19081/nsf19081.jsp</u> Tips for applying: https://www.nsfgrfp.org/applicants/tips_for_applying

There may be other grants that fit your needs, so it may be worthwhile to ask the fellowship office at Swarthmore or the academic coordinator in the Psychology Department for additional grants.

Please keep in mind that you are only eligible to apply to a NSF grant if you are a permanent US resident.

G. Application Fees - Kirsten

Applying can be expensive. But schools often offer admission-fee waivers. Most commonly, I've seen that if you qualify for GRE's fees reduction program, some schools will also waive their admission fees for you.

GRE Fee reduction program*: <u>https://www.ets.org/gre/revised_general/about/fees/reductions</u> *First come, first serve basis

Eligibility: "Program for individuals who can demonstrate financial need, for those who are unemployed and receiving unemployment compensation, and for national programs that work with underrepresented groups. A GRE Fee Reduction Voucher may be used for one GRE® General Test and/or one GRE® Subject Test. Voucher users pay 50 percent of the regular test fee. Fee Reduction Vouchers cannot be combined with other offers."

GRE Fee Waivers: https://www.ets.org/praxis/about/fees/fee_waivers/

Eligibility Criteria

To be eligible for a fee waiver, you must:

- 1. Be currently receiving financial aid.
- 2. Be enrolled in an undergraduate or graduate program and provide a current Enrollment Verification Certificate. **Note:** You are ineligible if you have a master's or a doctoral degree.
- 3. Provide a current FAFSA Student Aid Report (SAR) that shows an Expected Family Contribution (EFC) of \$3,000 or less.
- 4. Be required to take a *Praxis* test by an authorized score recipient.

To Apply

- 1. Complete the Fee Waiver Request Form (PDF).
- Obtain a current Enrollment Verification Certificate from your institution. Note: The Enrollment Verification Certificate must include a school seal or National Student Clearinghouse watermark or the signature of the registrar.
- 3. Obtain a current FAFSA SAR.
- 4. Scan all documents.
- 5. Attach all documents to your email message.
- 6. Send your email to PraxisFeeWaiver@ets.org.

POST-APPLICATION SUBMISSION

A. Preparing for Interviews - Luiza

Most PI will ask to interview you via Skype before inviting you for an in-person interview. That being said, the process varies a lot depending on the program.

If you received an interview invitation (Skype or otherwise), congratulations! That means you are one of the finalists in this tortuous process!

When preparing for your interview, I would recommend re-reading your personal statement and your CV. Make sure you can talk confidently about previous projects and their methodology and be ready to answer questions about them. Think about the research question(s) you posed in your personal statement. How would implement these questions in a study? What kind of paradigm or methodology would you use?

It is also sensible to take another look at the PI's webpage (if they have one, if not, check their google scholar page), and make sure that you understand their research interests and that you can link your research goals to those interests.

Once you have all the information you need, it is a good idea to practice. If you can, ask a friend to conduct a mock interview with you so you can rehearse answers to potential questions. Questions such as "Why are you interested in this program?" or "Can you tell me more about your research interests?" are very common and can be rehearsed.

In-person interviews

During the interview day, try to remain calm. You were invited for an interview because you are one of the top applicants in the pool of candidates. That, in itself, is a great accomplishment. They have already decided that you are qualified, now you just need to assess research and personal fit.

Keep in mind that professional attire is usually recommended. Also, make sure you understand how the interview day is structured. While in some schools you will only be interviewed by the faculty members you listed in your personal statement, other programs may require you to meet every faculty member in your sub-area. If you are going to be talking with people whose work you are unfamiliar with, it is a good idea to do your research beforehand and read some of their abstracts.

Also, it is important to note that schools will use this time to try to convince you they are they are the best program for your academic goals. Interview weekends

are as much about them trying to impress you than it is about you trying to impress them.

At the end of the interview, your potential advisor will likely ask if you have any questions. *Definitely ask questions*. If you don't ask anything, it will seem that you are not very interested in the program. Prepare some questions beforehand so you are not disoriented when the time comes. This is 5+ year commitment and it is important for you to see if the person interviewing you would be a good fit as a potential mentor.

Ask about their mentorship style. Are they more hands-on or hands-off? How often would you meet with them? Are you expected to work in a project associated with one of their grants or would you have the freedom to create your own studies? Where do they see their research going in the next few years? What current projects are they excited about the most?

Questions like these will help you assess if you have compatible work-styles and research priorities.

You will also have the chance to interact with graduate students during these interview weekends. As mentioned on the 'email graduate students' section, graduate students in your prospective lab are a great resource when it comes to learning about the work environment and about your potential advisor. It is also important to talk to graduate students outside your lab to get their perspective on the graduate program as a whole. You will likely have one or two days to get as much information as you can, try to do so wisely.

Ask them about work-life balance, living situation, what people do for fun. How has their experience been so far? How do they like working in their labs? How are the program requirements? Is the program course-heavy? Do they have qualifying exams? What do they think about the statistics training? How many quarters/semesters are grad students expected to TA? What are the expectations regarding lab hours or time off? Can graduate students live comfortably on the stipend offered by the program? Are you guaranteed funding for all 5 years of your PhD?

Keep in mind that, depending on the school, graduate students may have a lot of say in the admissions process. You are being interviewed to be part of their community, don't try to impress by using excessive jargon or by being arrogant. In all likelihood, you want to pursue graduate studies because you are passionate about science. Just communicate that by talking about your research in a conversational tone and by paying close attention when others talk about theirs.

Also, be nice to other applicants. Academia is a small world. Irrespective of where you end up, you will likely still see them at conferences and workshops across the globe. Many of the people I met during interviews are my friends today.

After the interview, take the time to send a thank you email to your potential advisor and the graduate students who you talked the most with.

B. Choosing a Program - Kirsten

You got in! Congrats! Now what?

You should spend some time thinking about what program would be best for you, both personally and professionally. After all, you're going to be spending the next 4-6 years in the program, so you want to make sure you're somewhere you'll be both happy and productive.

Questions to consider:

- 1) What kind of lab culture do I want?
- 2) What kind of department culture do I want?
- 3) How much autonomy do I want to explore my own ideas?
- 4) What do I want in an advisor?
 - a) Hands on vs. hands off?
 - b) Communication style?
 - c) Feedback speed?
 - d) Tenured vs. not?
- 5) Will I be able to collaborate with other professors?
- 6) How much have past lab members published? Is this something that is important to me?
- 7) Where do past lab members go after graduation? All academia? Teaching positions? Industry?
- 8) How important is location to me? Would I be happy anywhere?

You have likely considered these questions when you were identifying good "fits", but it is important to revisit these questions to make sure you're making the decision that makes the most sense for you.

RESOURCES

We've thrown a lot at you. Here are some of the most important links throughout the document.

- Interested in a clinical program? <u>This guide</u> seems to be popular online.
- Getting research experience while an undergrad
 - At Swarthmore
 - <u>Here</u> is a list of the labs on campus.
 - Grants and fellowships that can be used to support students' academic work over the summer
 - Hans Wallach Fellowship
 - Joel Dean Research fellowships
 - **senior thesis
 - Outside of Swarthmore
 - <u>APA page on summer internships</u>
 - Handshake may have outside opportunities (I worked at UC Berkeley over the summer after finding the internship on Handshake)
 - Look at the faculty of nearby universities; email them if you're interested in volunteering!
- Full-time research positions
 - Society for Personality and Social Psychology Career Center: <u>http://www.spsp.org/CareerCenter</u>
 - This Georgetown Wordpress: <u>https://gupsychology.wordpress.com/</u>
 - The Social Psychology Network: <u>https://www.socialpsychology.org/forums/jobforum/</u>
 - Join conferences' listservs (SPSP, SANS, or APS are large conferences that have active listservs)
 - Cold email professors. So long as you make your interest in their work in particular and are cognizant of their time (e.g., don't ask for a meeting, keep your email brief), many professors will respond
- Building up your stats chops
 - An introduction to statistical learning: <u>http://faculty.marshall.usc.edu/gareth-james/ISL/</u>
 - Answering questions with data: Introductory statistics textbook. <u>https://crumplab.github.io/statistics/</u>
 - Statistical Inference via Data Science: <u>https://moderndive.com/index.html</u>
 - An introduction to Bayesian thinking: Companion book to the Statistics with R course on Coursera. -<u>https://statswithr.github.io/book/index.html</u>
- Learning how to code
 - R Resources

- A very basic intro to R: <u>http://web.cs.ucla.edu/~gulzar/rstudio/basic-tutorial.html</u>
- This amazing book by Garrett Grolemund and Hadley Wickham is completely free and is a great introduction to data analysis in R. <u>https://r4ds.had.co.nz/index.html</u>
- Data visualization in R: <u>http://socviz.co/index.html#preface</u>
- Advanced R The book is designed primarily for R users who want to improve their programming skills and understanding of the language: <u>http://adv-r.had.co.nz/</u>
- General Resources
 - Datacamp is a paid platform that offers online courses in Python and R. It is a good way to learn a bit more about coding. <u>www.datacamp.com</u>
 - Santa Fe Complex Systems Society offers lots of free courses. <u>https://www.santafe.edu/engage/learn/courses</u>
- Interested in going to a conference?
 - List of conferences by subject:
 - https://psychology.ucmerced.edu/node/117
 - Conference Funding:
 - Dean's Office
 - \$400-600
 - <u>https://www.swarthmore.edu/student-life/student-conf</u> erence-funding-guidelines
 - Sigma Xi
 - Students are permitted to pre-apply for scientific conference/meeting travel funds for up to \$1000 per student/per year.
 - <u>https://www.swarthmore.edu/sigma-xi/funding</u>
 - Emergency Funds
 - https://www.swarthmore.edu/student-life/student-eme rgency-funding-guidelines
- GRE
 - Score select (the feature that enables you to only send you best scores to schools): <u>https://www.ets.org/gre/revised_general/about/scoreselect</u>
 - ETS fee reduction program:
 - <u>https://www.ets.org/gre/revised_general/about/fees/reductions</u>
 ETS' free online resources:

https://www.ets.org/gre/revised_general/prepare/

- Vocab help
 - We recommend creating your own mnemonics, but this website crowdsources others: <u>https://mnemonicdictionary.com/</u>
 - Magoosh vocabulary builder (free): <u>https://gre.magoosh.com/builder/vocabulary</u>
- Free practice tests

- Kaplan free diagnostic test: <u>https://www.kaptest.com/gre/free/gre-practice-test-options</u>
- 33 Free Practice Tests: <u>https://crunchprep.com/gre/2014/free-gre-practice-tests</u>
- Free study plans: <u>https://gre.magoosh.com/study-plans</u>
- Crafting your CV
 - CV checklist from APA (American Psychological Association: link: <u>https://www.apa.org/gradpsych/2015/01/curriculum-vitae</u>
 - Other tips on how to make a strong CV from APS: https://www.psychologicalscience.org/members/apssc/undergradua te_update/undergraduate-update-summer-2013/how-to-write-a-stro ng-cv
- Advice for detailed advice on emailing potential advisors: <u>https://lucklab.ucdavis.edu/blog/2018/9/17/emailing-faculty</u>
- Writing a compelling personal statement
 - Jay Van Bavel (NYU), June Gruber (University of Colorado in Boulder), and Neil A. Lewis, Jr. (Cornell University) take on personal statements (link)
- Applying for grants
 - NSF Graduate Research Fellowship Program:: <u>https://www.nsfgrfp.org/</u>
 - NSF resources
 - FAQs: https://www.nsf.gov/pubs/2019/nsf19081/nsf19081.jsp
 - Application components:
 https://www.nsf.gov/pubs/2019/nsf19081/nsf19081.jsp
 - Tips for applying: <u>https://www.nsfgrfp.org/applicants/tips_for_applying</u>
- Application Fees
 - GRE Fee reduction program:
 - https://www.ets.org/gre/revised_general/about/fees/reductions
 - GRE Fee Waivers: https://www.ets.org/praxis/about/fees/fee_waivers/

Ending Thoughts

We really hope you find this guide - and the resources presented here - to be helpful.

Applying to graduate school can be a very stressful process, but you are not alone. Many people apply every year and we just went through the process ourselves.

If you receive rejections, try not to take them personally. Prepare as best you can, but be mindful that some factors are outside your control. Sometimes the professor you like may not be accepting students that year, or the university is trying to save money by accepting a smaller cohort. You can't predict it all. Take some time to reassess the strengths and weaknesses of your applications and decide on next steps. Ask your professors for feedback, they may be able to guide you in the right direction.

If you get in, congratulations! Graduate school can be an incredible learning experience and we hope you are excited to start. If accepted to more than one place, pick the program that best fit your interests and send the others polite rejection emails. If you are ahead of the curve and interested in learning a bit more about the graduate school experience, <u>here</u> is a blog post with some advice to new graduate students.

Good Luck!!

Feel free to email me with questions: Luiza: <u>lsantosl@stanford.edu</u> Kirsten: <u>knmorehouse@gmail.com</u>

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