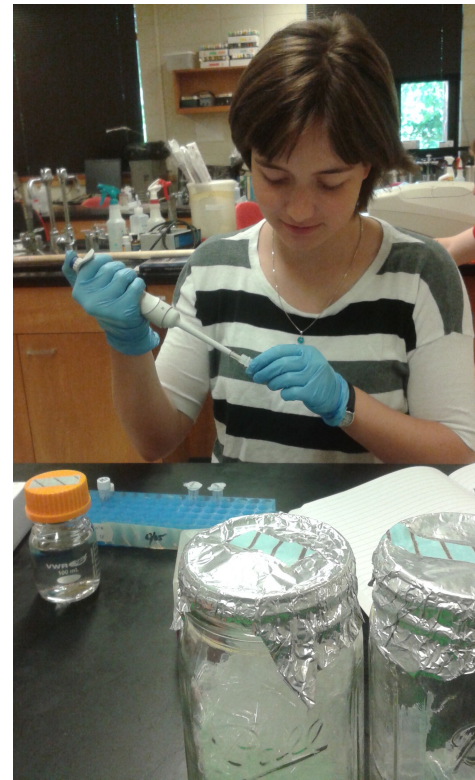


PhD and Master's Programs

Cameron Geller and Cam Hoffbeck

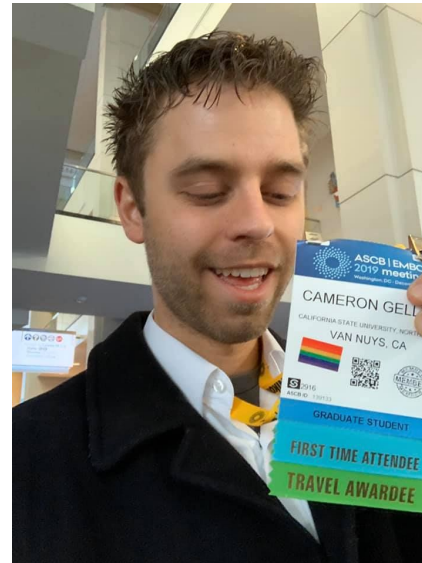
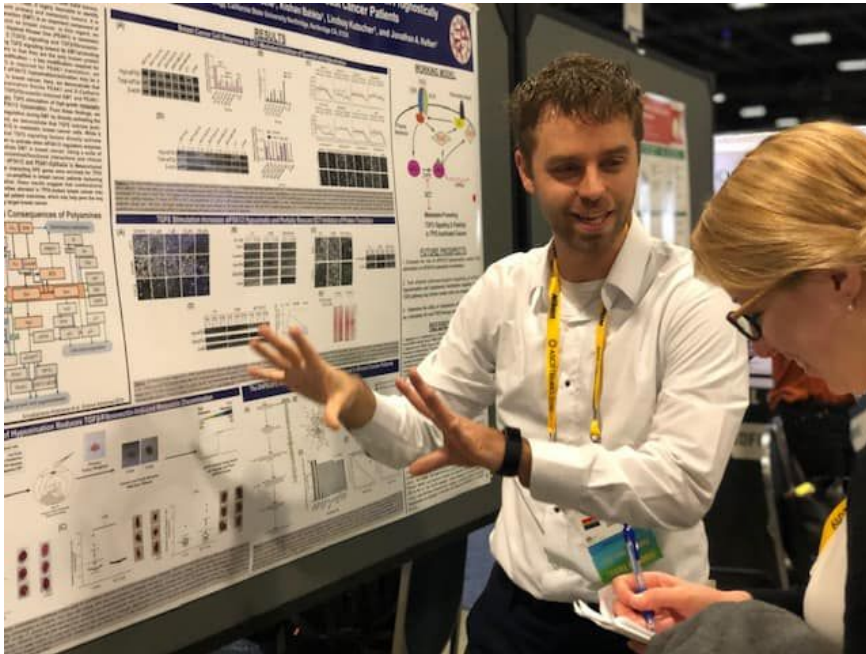
Undergrad experience and research

Time to experiment with different classes, jobs, research



Graduate experience and research

Time to experiment with different classes, jobs, research



I have a degree, now what?

Questions to ask yourself as you get your Bachelor's degree:

- What do I see myself doing long-term?
- Do I enjoy the field I've been studying, does it continue to interest me?
- What skills do I have, and what skills do I still want to learn?
- Is there a career that really interests me
- What kind of money do I want/need to make, and when do I need to start making it?



Deciding to go to grad school

There are options after undergrad!

- Teaching
- Research
- Grad school
- Government programs
- Professional programs
- Gap year

GOING TO GRAD SCHOOL



Master's or PhD?

Master's degree

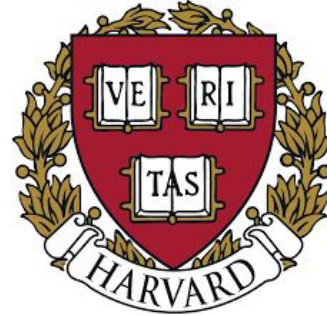
- Shorter time commitment (1-3 yrs)
- Often not funded (can cost a lot of money out of pocket)
- Qualifies you to participate in research

Doctorate degree (PhD)

- Long time commitment (4-6 yrs)
- Usually able to get teaching appointments and grants to cover tuition
- Qualifies you to lead a lab and teach

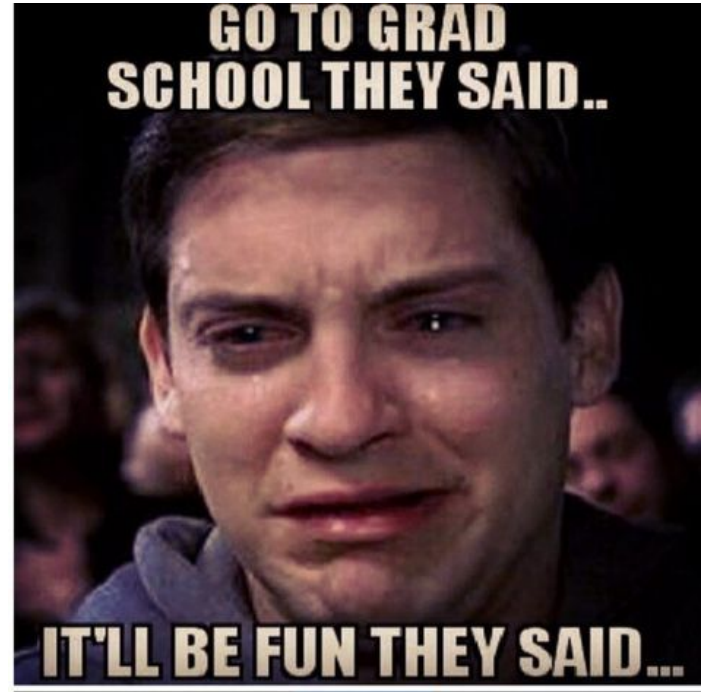
Choosing a grad school

- Do you want a Master's or PhD?
- Where do you want to live?
- How much money do you have? Are you willing to take out loans?
- How is the financial aid and healthcare offered?
- What programs are better regarded?
- What are you interested in studying?
- Do you want an opportunity to teach?
- Is there someone you're interested in working with?
- Do you need to take the GRE?
- Does the school take diversity and inclusion seriously?



Pros and cons of graduate school

- Pros
 - Great resume booster
 - Training grants, publications, conference presentations, etc.
 - Necessary for certain jobs
 - University professor
 - Chief scientist (industry)
 - Policy making (government)
 - Consulting (business - non science)
 - Improve your skills in scientific reasoning and critical thinking
 - Very different experience from undergrad (mostly memorization)
 - Extremely invaluable in any job (science/non-science)
 - School is paid for
 - Pay for tuition, insurance, research stipend, additional benefits
 - Professional development/networking opportunities
 - Research conferences
- Cons
 - 4-6 years of school (not including post-doctoral education)
 - School is not always paid for (check program details)
 - Pay is not very much (varies by program)
 - UC Programs - \$33-34k/year



Applying to Graduate Programs

- Writing a personal statement
 - Most time consuming part of application
 - Start as early as possible
 - More on next slide
- Writing a research statement
 - More on next slide
 - Research happening at CSUN
- GRE requirements
 - Different schools have different requirements
 - Do your research
- Contacting letter writers
 - 3-4 letter writers
 - Ask for STRONG letter
 - Give writers minimum 2 weeks (more is better)
 - 3 months in advance
 - Can speak on your research experience and ability to matriculate into grad school
- Contact PIs at programs of interest
 - "Cold" email
 - Subject line - important
 - See template to the right
- NIH reporter
 - Does PI have funding?
 - Alternative funding sources

SUBJECT LINE: Prospective Graduate Student Inquiry

Dear **(Insert Professor Name Here)**,

I am a graduate student at CSU Northridge in Los Angeles, CA. I am completing my Master's degree in **(insert PI's name and research lab)**.

My current research project at CSU Northridge focuses on **(insert research experience here)**.

I am writing to inquire about the possibility of becoming a PhD student in your laboratory at **(insert university here)**. I have researched your lab's webpage and am quite familiar with your group's contributions to the field of **(insert research topic here)**.

I am attaching my full CV and a brief, one-page paper that highlights my research project/experience in further detail that could serve as the basis for my preparation to successfully matriculate into your research lab.

The deadline for my PhD application is **(insert deadline here)**. If you are willing to consider my candidacy further, maybe we could talk very briefly over Zoom within the coming days.

Thank you very much for your time and consideration.

Warmest regards,

Personal statement

- Personal statement
 - Give yourself 3-4 months
 - 18 drafts
 - Before writing
 - 6-8 accomplishments showcasing readiness for PhD program
 - Narrow down to 4 themes
 - (ex: scientific contributions, teaching, leadership, volunteering, etc.)
- Personal statement format:
 - Requirements - 1-2 pages (single spaced, 12 font)
 - Introductory paragraph - 3 sentences
 - Four main paragraphs
 - One paragraph per theme
 - Each paragraph
 - Sentence one - state hardship/experience
 - Sentence two - list accomplishment
 - Sentence three - conclude/connect into one of 4 themes selected
 - Conclusion paragraph - 3 sentences
 - Tie together all four themes

Research statement (Program-dependent)

- Extremely important for grad school
 - Need to be a strong scientific communicator
 - Give yourself 3-4 months
- Application requirements
 - 1-2 pages (12 font, single-spaced)
 - Publications helpful, but not necessary
- How to prepare
 - Use templates from scholarships, volunteering applications, etc.
 - Read through your PIs grant proposal
 - Go through research lab notebook
 - Summer research programs/university lab coursework
 - Not sufficient for grad school entry
 - Get into a research lab!!!
- General outline
 - Background, purpose of project, experiments/results, conclusions, broad implications
 - Great to mention if your work has been presented at conferences (conference awards, travel scholarships, etc.)
 - Also research-related scholarships/awards

Interviewing at schools

- First of all...CONGRATULATIONS!!!
- Attending interviews is awesome
 - Airfare/hotel/food provided
 - Chance to learn about program first-hand
 - Meet prospective applicants/lifelong friends
 - Meet PIs/labs of interest
 - Social hours are super fun
 - Be careful...
- How to prepare
 - Read over your application material LIKE CRAZY (personal/research statement)
 - Know your research inside out
 - Talk with grad students in labs of interest
 - Read over research of your interviewers
 - They LOVE talking about their science (showcase scientific fluency)
 - Talk to friends in graduate school for advice

Me, finding out I was accepted to interview at my top choice in PhD program circa 2020 (colorized)



Accepted into Program/Choosing PIs for rotations

- DOUBLE CONGRATULATIONS!!!!
- Discuss your expectations for the lab with the PI
 - Coming in on weekends/holidays
 - How many hours per week
 - 9:00am-5:00pm???
 - Work/life balance
- Talk to students in the lab
 - Undergrads, Grads (Masters, PhD), Post-doc
 - Ideally someone at the level you will be entering
 - Zoom or Skype over email (written records)
- Focus less on the research subject and more on the lab experience
 - Doesn't matter what you get your PhD in, as long as you get a PhD
 - Less known subject - wider set of skills
- Can you see yourself in the lab for several years???
 - 2-3 years = Masters program
 - 4-6 years = PhD program

Me the first year of my
PhD versus now:



What if I get zero interview offers...



Resources

<https://www.princetonreview.com/grad-school-advice/choosing-a-school>

<https://graduateguide.com/>

<https://myidp.sciencecareers.org/>

<https://www.usnews.com/best-graduate-schools>

DO YOUR RESEARCH!!!!!!