



*So You Want To Apply
To Graduate School*

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Today:

1. Overview of application process
2. Panel discussion
3. Questions



Panel Discussion

moderated by David Vizgan



Prof. Lisa Young
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Who applies to graduate school? If you...

- Deeply enjoy research
- Want to work at the frontiers of today's science
- Are interested in open-ended problem solving
- Are resilient, focused, determined to accomplish your goals
- ... APPLY TO GRAD SCHOOL!

What is graduate school?

- **Long**
 - 6+ years on average
- **Difficult**
 - Working on niche, challenging problems for many years
 - Very different mindset compared to e.g. undergrad
- **Not glamorous**
 - low pay, high workload
- **But very fulfilling!**

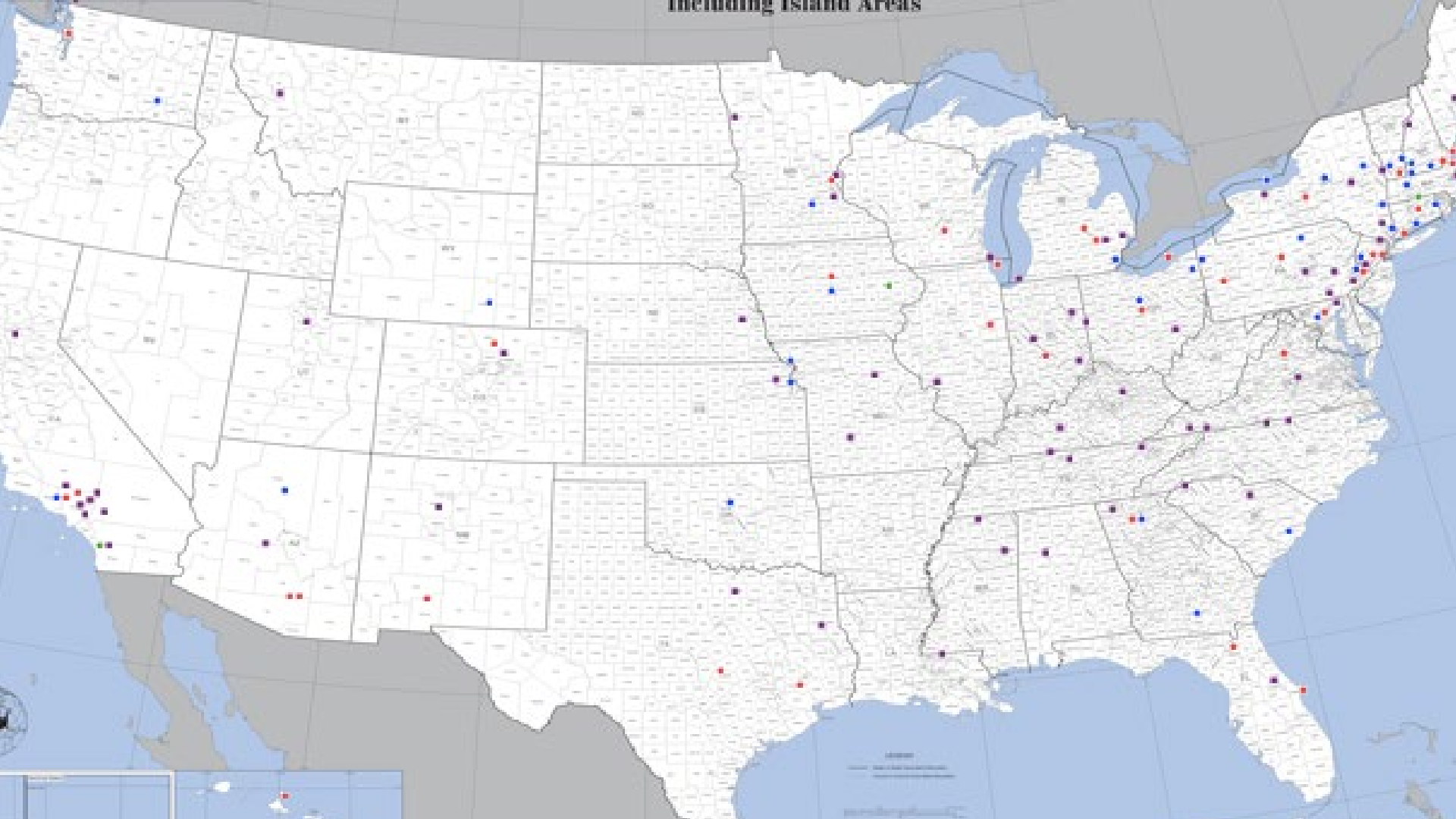
What is graduate school ?

- You are awarded a PhD degree for completing novel research in your scientific field
- 1st year: funded to be a Teaching Assistant (TA)
- Eventually funded as a Research Assistant (RA) or by fellowships, grants, etc.
- Grad school is a job
 - Challenging but rewarding

Where are grad programs for astro/physics?

- Many universities in the U.S. offer PhD programs in Astronomy
- Even more offer PhDs in Physics
- Also, possible to do your PhD degree abroad
 - Typically in Europe, you must have a Master's or equivalent before you can apply for PhD
- Lot to consider when applying to a graduate program...

Including Island Areas



When do I apply to graduate school?

- If you're eager, fall semester of senior year
- No rush to go to graduate school!
Taking time off will (probably) not hurt your chances
 - *Some grads at UIUC worked in industry before applying!*
- Can also take a year or two to work on research before applying/re-applying

Why should I apply to graduate school?

- Have a reason to go to grad school!!!
- PhD: gateway to a career in academia
 - But jobs are hard to get!
- PhD also provides opportunities for rewarding careers in industry
 - e.g. data science, finance, aerospace, tech, teaching

How do I apply to graduate school?

Recipe for grad school application:

1. Research experience
2. Grades (GPA)
3. Reference letters
4. Essay(s)
5. CV / resume
6. GRE (*basically optional*)

How do I apply to graduate school?

Research Experience

- **VERY IMPORTANT / MOST IMPORTANT**
- More experience = better
- However, one quality research experience > many short experiences
 - e.g. completing a 2-3 year project is preferable than 4 short, unfinished projects
- **Think about research NOW!**

How do I apply to graduate school?

Research Experience

- VERY IMPORTANT / MOST IMPORTANT
- Publications, awards, posters are very beneficial
- TLDR: Work on research NOW, try to complete projects, ask your research advisors to write your letters of recommendation

How do I apply to graduate school?

Research Experience

- How to get involved in research:
- Find professors whose interests intersect with yours!
- Work summers in research labs, either at UIUC or at other universities (REUs)
- Start projects, and try to finish them
- Take initiative!

How do I apply to graduate school?

Grades / GPA

- **ALSO VERY IMPORTANT**
- Grad schools want to see success in hard physics classes
- Showing improvement over time also looks good
- However, there's more to a strong application than good grades alone

How do I apply to graduate school?

Letters of Reference

- Best letter writers will be your research advisor(s)
- After that, professors who can speak to your academic and scientific abilities
- Letters take a lot of work to write - ask early, provide your cv, be organized!

How do I apply to graduate school?

Letters of Reference

- How to cultivate letter writers?
- Build relationships as early as possible in your department
- Research advisors should be able to describe your research abilities
- Other professors etc. should speak to your unique qualifications (beyond grades)

How do I apply to graduate school?

Essays

- Generally, grad school application has two essays
 1. Statement of Purpose: why are you applying to **this graduate school**?
 2. Personal Statement: why are **you** applying to this graduate school?

How do I apply to graduate school?

Essays

- SOP: What interests you about a specific school?
- What are your relevant experiences and credentials?
- What are your research interests?
- How do they align with a school's research?
- Who do you want to work with?

How do I apply to graduate school?

Essays

- PS: Some schools will also ask for a “personal statement”
- More open ended
- Talk about your journey as a scientist, your career goals, how graduate school fits into all of that, etc.
- ~~“When I was 5 years old, my parents bought me a telescope”~~

How do I apply to graduate school?

Resume / CV

- Some schools want a resume (1-2 pages long)
- Other schools want a CV (several pages long)
- **Should include all relevant information about your academic career to date**
- e.g. degree, GPA, research experiences, skills, interests

How do I apply to graduate school?

GRE

- GRE, Physics GRE scores are now optional at most programs
- pre-COVID, were very important to successful applications
- If your grades are lower than you would have hoped, or you're lacking research experience, consider taking the GREs

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